

COUNTRY LIFE

ARCHITECTURAL SUPPLEMENT

SATURDAY, APRIL 22nd, 1911.

OSLER

International Building Trades' Exhibition
OLYMPIA

Stand No. 168

Specialists in
Electric Light Fittings
for Country Houses

Messrs. Osler have the honour
to invite an inspection of a
magnificent display of new
models designed to be in keeping
with all periods of English
decoration, which they are
exhibiting at the International
Building Trades' Exhibition,
Olympia.

*An Album of Photographs,
illustrating their latest patterns,
is in course of preparation.*



100, OXFORD STREET, W.



By Special Appointment
Furnishers to Her Majesty
Queen Alexandra

SHOOLBRED'S

Furniture. Bedding. Decorations.

One of the largest stocks of
Furniture in the Kingdom,
unvaryingly reliable

and

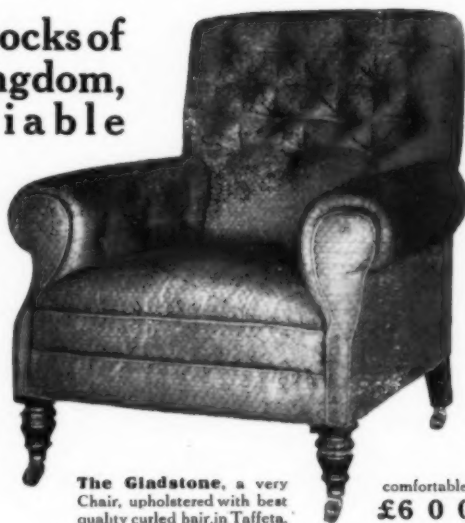
Moderate
in Price

Upholstered Goods
made by Shoolbred's
have no equal for
comfort, durability,
and good value.



The Cambridge.
all hair stuffing.

large Roomy Easy Chair,
double springs,
covered with Taffeta. **£5 12 6**



The Gladstone, a very
Chair, upholstered with best
quality curled hair, in Taffeta.

comfortable
£6 0 0

Charming and helpful features of Furnishing at Shoolbred's are the groups of SPECIMEN ROOMS and FLATS completely furnished and arranged as for occupation. They exhibit the newest Furnishing and Decorating Schemes, and are a helpful guide to tasteful Furnishing



A handsome Dining Room panelled with Oak, with Oak Furniture. One of the fully Furnished Specimen Rooms to be seen in Tottenham House.

TOTTENHAM COURT ROAD, LONDON, W.

THE PRESENT CONDITION OF DOMESTIC ARCHITECTURE.

By ERNEST NEWTON, A.R.A., VICE-PRESIDENT R.I.B.A.

THE history of the English race is very clearly written in its domestic architecture. We are a home-loving people, and from the earliest settled times we have given serious attention to the art of house-building. Well into the last century our traditions were practically unbroken, and it is possible to date without much difficulty every house that was built up to that time, and to trace from their houses the changes and developments in the manner of life of the people who lived in them. These changes were slow and leisurely, as became a quiet and naturally rather conservative people. Railways, more than anything else, killed this traditional art, but there were, of course, many other contributory causes. The nineteenth century began an era of change in the outlook and the mode of life of the whole country. Communities which from time immemorial had lived remote from the greater centres of activity, content in their seclusion, suddenly found themselves caught in the stream of modern developments, and their pleasant, uneventful existence rudely invaded. Home industries were transplanted to factories, and the craftsman had to give way to the mechanic. It was exciting, but no sort of time for the further development of traditional architecture. In the sixties and seventies we began to settle down again, but by that time traditional architecture was practically dead.

This is very rough-and-ready history, but it is near enough for the purpose of dating with more or less accuracy the renaissance of English domestic architecture. The pioneers of this renaissance—Norman Shaw, Nesfield, Philip Webb, Devey and some few others—each picked up the thread of traditional design arbitrarily and gave to his buildings a personal character, so that their designs, although based on old work, were in no sense mere copies; they aimed at catching the spirit of the old building rather than at the literal reproduction of any defined style. This was the starting-point of the great development that has taken place in domestic architecture during the last forty years. Circumstances were favourable. The great commercial activity of the period produced almost a new class—men who from small beginnings had made large fortunes and were fired with an ambition to “found a family.” Their first step towards this object was to buy land and build a house. Since that time to the present day almost every note in the possible scale of house design has been struck. We were asked forty years ago to invent a new style, and we have invented a dozen. We have had houses recalling the buildings of the seventeenth and eighteenth centuries, and of earlier periods; we have made full play with building materials, concrete, stone, tiles, pebbles, rough-cast,

in all sorts of skilful or playful combinations of colour, form and texture; we have used all motifs, from adzed beams and rough stone to gilded and painted ceilings and marble floors; we have even tried our hands at the Art Nouveau: though it has not taken so much hold of England as of the Continent. Doubtless it has its place in the general development of things, and, in fact, the work of some of its ablest exponents has a certain directness, reticence and refinement which gives it a character of its own that is not unattractive. But in the hands of the wilder spirits it seems to me simply a bizarre sort of nightmare, defying every law of construction and natural form, and even decency.

As we review this half-century of house-building there are, perhaps, four points especially noticeable. In the first place, it is the day of the smallish house. The Nash of our time would find the “country seats” and “noblemen’s mansions” no longer being built. And this smallness of the house has resulted in a peculiarly intimate touch. Perhaps the most marked feature of our modern domestic architecture is its individual character. Every part of a building from start to finish is minutely designed. The projection, depth and contour of each moulding is carefully drawn; the colour and texture of walling and roofing materials, and the manner in which they shall be used, are carefully considered and made to contribute to the general effect; mantel-pieces, grates and panelling, door handles and hinges, even nails, are all drawn and made to our liking. The inevitable drawback to this intensely personal practice of architecture is that, while it develops the art of design, it does little or nothing for the craft of building. The architect has, so far as he can, gathered up the lines of traditional building, and conscientiously or capriciously follows one or the other just as his fancy for the moment dictates. The builder of the ready-made house is totally unmoved by this intensive architectural culture; and while the conscientious architect is striving after perfection, the speculating builder gaily devastates whole districts, his only ideal being the greatest apparent accommodation for the least actual cost. It is all a little bewildering, and it is difficult and not very profitable to attempt to forecast the future.

In the second place, this revival of domestic architecture has been accompanied by a parallel revival in the arts subservient to house design—by what is known as the “arts and crafts” movement. Those who can remember the pre-Morris days know to what depths the arts of house furnishing and decoration had fallen—wall-papers of a ghastly green, with gold fleur-de-lys dabbed on at regular



“THE SMALLISH HOUSE.”

intervals; the "suite" upholstered in crimson or sky blue repp; the distressing carpets and amber-dyed sheepskin mats. Morris changed all this and gave us fine colour and pattern. It is impossible to over-estimate his influence, both direct and indirect. He created a standard both in design and workmanship, and although, of course, his views and dogmas were not universally accepted, he opened people's eyes to possibilities of which they had not even dreamed. Those who had been vaguely oppressed by their surroundings became conscious of the cause of their discomfort, and demanded something better, even if they were not prepared for a complete reversal of their former views. This demand created a supply. Makers of stuffs and wall-papers really did what they could to meet these new requirements; naturally, with varying success. Many architects assisted the manufacturers by designing wall-hangings, carpets and other fabrics.

The third point is the revival of the lost art of garden design. The "House Beautiful" still required a setting. The architect who had given so much thought to the building was forced regretfully to resign the laying-out of the garden to alien hands; the cult of the curly path, of the kidney-shaped bed and clump of pampas grass was well established and not easy to dislodge. Gradually, however, people's interest was aroused by garden books and illustrations of the fine old gardens scattered up and down the country. Now the architect plans the garden almost as a matter of course. The dethronement of the nursery garden-designer and the installation of the architect in his place has come about rather suddenly. The architect is sometimes a little embarrassed by the confidence reposed in him as a garden-maker. His knowledge of planning and his powers of designing an effective "lay-out" may in some cases exceed his horticultural learning. Of course, he need not be a specialist in this line, but he must have a fair working knowledge of plants and their habits, of when and where to put them, or his garden will be shorn of more than half its interest. It is the contriving of cunningly-sheltered nooks for one kind of plant and the naked exposure of others that is three-quarters of a well-conceived garden plan. This applies much less, of course, to the arrangement of large and quite formal gardens than to the small garden, which requires a far more delicate and intimate handling.

All this is rather a tremendous result to have achieved in so short a time, especially when it must be remembered that for perhaps the larger half of that time architects had but little support from the public. There were many unrecorded and, fortunately, bloodless battles before the architect and his client saw eye to eye. I should be claiming too much to assert that victory is ours all along the line even now; but the growth of public interest

architecture of public buildings, with which the daily Press is chiefly concerned, has not made quite the same kind of advance as domestic work. The reason for this is that in the latter architect and client are in touch; they discuss requirements and details; there is a sort of partnership. Public architecture, on the other hand, is generally the result of a competition. The architect has no direct employer,

but has to work to hard-and-fast printed directions; there is no elasticity of give and take; and it is all "in the air." Elaborate drawings have to be made showing many details and features if a competitor is to have a chance of success; and when successful he cannot leave these features out; he is the slave of his fine drawings. In the case of a house there is opportunity for much personal explanation, which, indeed, is often required. The client certainly is in many instances not attracted by the elevation of a house, which is quite right when built, but not, as a drawing, sufficiently effective to get a chance if it were subject to the conditions of a competition.

The fourth and the most important point is the genuineness of the progress. It is quite clear that if the revival had been merely a revival of externals—a sort of Christmas-card architecture—it would have had no vitality, and would have deservedly died out long ago. But it has been a real attempt to grapple with the requirements of modern life. Of course, it was hardly to be expected that it should have been wholly free from extravagances and affectations. We have, perhaps, used the farmhouse motif beyond its proper limits. For a house of moderate size, and for people of simple habits, it is, of course, legitimate; but it is a commonplace of house-building that, as far as possible, the wishes and requirements of those who are going to live in the house should be met. I say "as far as possible" because people's wishes are sometimes rather chaotic, and an architect has occasionally to invent their requirements for them. But, speaking generally, we may say that domestic architecture will progress more naturally and soundly if the architect honestly faces the often difficult problems set him, instead of enforcing his own individual views. The ordinary man who wants a plain, simple house, with well-lighted rooms, carpeted floors and all that goes to the making of a comfortable home, is rather hardly used when he finds that he has to

sit in a sort of low, farmhouse kitchen, with a gritting floor and a reluctant log fire. And yet, if the architect has duties to his employer, the employer no less has duties to his architect. A certain give-and-take is necessary. The architect, with his experience, should be left full freedom in details. But if the employer has definite views as to the way in which he wants to live, it is no part of the architect's duty to tell him that he is



AN ARCHITECT'S GARDEN.



"THE FARMHOUSE MOTIF."

and appreciation is very marked, fostered and dictated, no doubt, as much by the attention drawn to domestic architecture by books, magazines and weekly papers as by the direct influence of the architect. The omniscient daily Press alone lags behind, and has still to discover the art of architecture. With a few notable exceptions architectural criticism in the daily papers has not advanced much beyond the penny-a-line stage; and there is no doubt that the

HAMPTONS

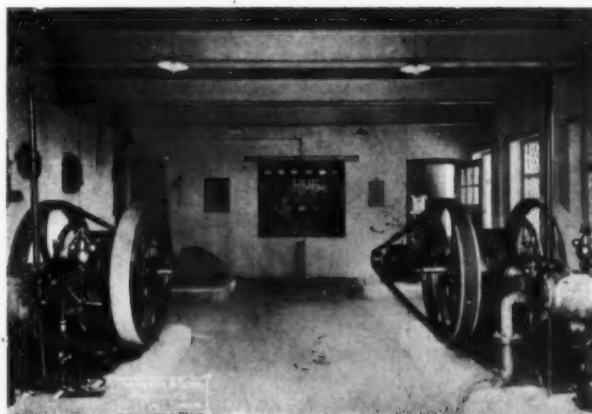
Interior Woodwork



A combined Music Room and Billiard Room, built and fitted throughout by HAMPTON & SONS last year. In the Gallery is a large sumptuously furnished Billiard Room with a full sized Billiard Table. This magnificent room is an addition to Westfield, West Hill, Highgate.

Hamptons' New System of Electric Lighting

secures to the user a great saving in both initial outlay and cost of running



The Engine House illustrated above was recently built by Hamptons for a client in the West of England. At the same time Hamptons supplied and installed the duplicate Electric Light Plant shown in the photograph.

HAMPTON & SONS are now installing, at a lower cost than has hitherto been possible, complete Electric Lighting Plants, consisting of Petrol, Oil or Gas Engine, Storage Batteries, Dynamo Switchboards (by leading makers).

For instance:—

Small Petrol-driven Plants, including wiring house throughout, from £140
Oil or Gas Plants from £250

Rates for larger and Steam Plants
will be forwarded upon request.

Wiring Installations carried out from 10s. 6d. per 16 Candle-power Lamp, according to condition of Building.

DECORATIVE CONTRACTORS

Wallpapers



Hamptons' "Willow" design made in Black, Green and Red and Gold Lacquer Colourings, and in Blue, Grey and light colours for Staircase Decoration.



Hamptons' "De Soveral" design. A rich Brocade effect, made in dark and light colourings.

Speciality—PANELLING in Wainscot Oak at 1/6 per square foot. Can be seen in HAMPTONS' NEW FITTED ROOMS.

Exterior and Interior Plain Painting
and Decorating at lowest rates.

Write for New Book on all matters appertaining to Building and Decorating.

HAMPTONS Experts in Sanitation

ESTIMATES PREPARED FREE FOR SANITARY WORK
OF ANY DESCRIPTION.

SURVEYS WITH FULL REPORT.

For LONDON & SUBURBAN HOUSES rated under £200 per annum £2 2 0
For LONDON & SUBURBAN HOUSES rated over £200 per annum £3 3 0
For COUNTRY HOUSES per day - - - - - £3 3 0



The above is a photographic illustration of a Bathroom recently fitted up by Hamptons in a West End Mansion. The Tiles are of a fresh green colour in different tints, and being formed of a vitreous material the effect is most pleasing. These Tiles can be seen in Hamptons' Sanitary Showrooms either in green or blue.

DETAILS AND PRICES OF BATHROOM ILLUSTRATED.

Hamptons' "Trafalgar" Bath, white porcelain-enamelled inside and out-side, plated fittings	£9 15 0
Hamptons' Nickel-plated Shower Apparatus, with india-rubber curtain	5 10 0
Hamptons' Bastard Statuary Marble Lavatory, with high marble back shelf and plated fittings	12 9 0
Hamptons' Nickel-plated Double Pattern Towel Airer, 3 ft. by 3 ft. 8 in., with control valve	9 10 0
Bath Seat	9 6
Cork covered	0 15 6

NOTE.—All the fittings shown on this page are on view in Hamptons' Showrooms, the Closets being in working order.

HAMPTON & SONS, Ltd., Pall Mall East, LONDON, S.W.

The Largest Stock of Genuine Antiques in London

Furniture and Decoration

Estimates Free
:: :: in :: ::
Town or Country



Messrs & Davis

Archts.

MODERN PANELLING AND CARVING in a Town House ;
carried out by us under the supervision of the Architects.

Antique or Reproduction

Restorations of Old
Buildings success-
fully undertaken

During the past few years we have been entrusted with many important orders for the Decoration and Restoration of Town and Country Mansions. A list of well-known Residences, with the names of Architects under whom we have worked, may be had on enquiry. Awarded Three Grands Prix in 1908 and 1910 for Constructive Decoration



GENUINE OLD INLAID AND CARVED OAK PANELLING in a Country Mansion :
supplied, adapted, and erected by us under the supervision of Reginald Blomfield, Esq., A.R.A.

GILL & REIGATE, Ltd.

The Soho Galleries, 73-85, Oxford Street, London, W.

mistaken. Perhaps he will like many rooms, one for every part of the business of life, or he may prefer one big room for general family use. That is his business; but it is the architect's business to make a whole of these units. Some wholly incongruous feature is often introduced and insisted on after the general scheme is complete and the work begun, and the result is deplorable; whereas if a point had been made of it at first, the architect would have had a chance of making it the pivot on which the whole of his design turned.

But, on the whole—and this is the most encouraging point about the present position in domestic architecture—the real progress made has been the result of interaction between architect and client. It has been a real attempt to solve new problems. Practical needs, instead of being ignored or overlooked, have brought about new types of plans. Considerations

of aspect have settled the position and sequence of rooms. The materials available for building in different parts of the country have imposed limitations, and suggested certain methods of using them. The proper lighting and most convenient arrangement of domestic offices; the position of fireplaces; the disposition of beds and other furniture—all these practical problems are of the essence of any scheme for the planning of a house, and each in its turn, when successfully solved, has helped towards the realisation of the vision which is always enticing us to further efforts, the ideal house which everyone wants—a house compact but spacious, noiseless, light, airy and cheerful, cool in summer and warm in winter, well ventilated but free from draughts, a house that costs little to build and less to keep in repair, yet "built for eternity" and comely and pleasant to look upon.

THE BUILDING EXHIBITION AT OLYMPIA.

IN the leading article of this Supplement, Mr. Ernest Newton has laid great stress in his usual informing and vivacious way on the great benefits which have accrued to architecture from the sympathetic relationship between architect and client. This would have been impossible without a solid basis of knowledge on the part of the general public, and there could scarcely be a more practical commentary on the increased interest which it takes than the Building Exhibition, which will be open at Olympia from April 22nd to May 6th. It is even more than a commentary—it is a portent. Years ago the organisers of the exhibition were content to summon those engaged in the building and allied trades to a far smaller hall, and they did not concern themselves at all with the general public. Therein they were right, for fifteen years ago a large majority admitted that building was a necessary of life, but had hardly discovered that there is such an Art as Architecture. To-day it is very different. Every architect and builder who wants to know the latest developments in the work of those manufacturers who minister to good building, the useful equipment and the decorative beauty of a house, will go to Olympia; but the general public will also go, and in far greater numbers, to look into these matters for themselves. Any who take an interest in any branch of building and are prevented seeing so notably interesting a show, will have just cause for regret. The Great Hall at Olympia is full of exhibits. In point of fact, the exhibitors number over three hundred, and what they have to show comprises practically every material and device which can interest both the general public and the technical person. It is obviously impossible within the limits of these notes to make a reference to every stand which may justly command the visitor's attention. The catalogue of the exhibition is a big book in itself, and for a complete idea of what is to be seen its pages must be consulted. It is not from any failure to recognise the importance of machines for brick-making, sawing and the like that reference to them is here omitted; but the space at disposal must be devoted to those things which interest the building owner and the architect rather than the builder himself. Moreover, as each section of the Building Trade is represented by many firms, all good in themselves, but showing to some extent the same phase of inventive and manufacturing ability, only one or two can be mentioned in each class as representative of the rest. We may take first those exhibits which have to do with the initial fabric of the house.

One of the first requirements in building is that of a damp-course for walls. If it be omitted altogether, or when provided turn out inefficient, every sort of trouble that follows from damp walls may come upon the unlucky houseowner. The Seyssel and Metallic Lava Asphalte Company (Stand 31) shows models of damp-courses laid horizontally over a stepped section to prevent any movement in main walls. It is to be remembered, however, that damp can find entrance not only by rising from the ground vertically through the thickness of the wall if not checked at its base, but also as the result of rain driving against a wall built of a too porous material. In order to prevent such a misfortune, which it is almost impossible to cure after the wall has been built, vertical damp-courses can also be used, and these will often be of particular value in the case of additions to old buildings. Practical examples of these are to be seen at the Seyssel Company's stall.

Among other exhibits devoted to structural features attention may be drawn to the exhibit of the Trussed Concrete Steel Company (Stand 153), where there can be seen various displays showing the

adaptation of the Kahn Trussed Bars to reinforced concrete construction of every type. These bars have been used to a very large extent in a great many public and private buildings in England, and as far as country estate work is concerned, they have proved their worth when employed in the construction of bridges, retaining walls, tanks and the like. A new feature to which the company is now drawing attention is the steel reinforcement known as "Hy-rib," which finds its particular application in roofs, walls and partitions. Among its advantages is the fact that by its aid a good deal of the wooden centring which is ordinarily used can be dispensed with.

No less interesting is the exhibit of the Expanded Metal Co. (Stand 156), which shows their well-known steel reinforcement for concrete. It has been used to an enormous extent in ferro-concrete constructions of every sort and kind, and some of its applications are illustrated in the article by Mr. Dyson in this Supplement.

Passing from walls to roof, we notice the exhibit of "Poiite" Asbestos Tiles and Sheets made by Bell's United Asbestos Company, Limited (Stand 28). It is claimed for them, and justly, that they are absolutely permanent, being fireproof and frostproof, and that in consequence the cost of upkeep of a roof so covered is nil. The "Poiite" asbestos sheets are especially useful for walls and ceilings in buildings where there is moving machinery, as, for example, in those outbuildings of a country house where the electric-light plant finds its place. The lightness of the material, particularly in its use for roofs, makes for considerable economies, as the timbers which carry it can be much slighter than those required to carry ordinary tiles or slates.

Windows are such a very important factor as affecting both the design and the liveable character of a house, that considerable care should be devoted to their choice. This is especially the case with iron casements. The days are long gone by when people were satisfied with a window made out of flat bar iron by the village blacksmith. They were very picturesque, but they made no pretence of keeping out either the wind or the rain, nor have the casements of a more elaborate section which have been in vogue for the last twenty years been always entirely successful in these directions. It may be very pleasant to think of the village blacksmith hammering out iron casements on his anvil, but woe-betide the person who lives in a house where such casements are fixed! We have the right to expect in these days that the same degree of engineering skill shall be applied in this department of house equipment as has long been given to heating, ventilating and the like. At the exhibit of Messrs. Henry Hope and Sons, Limited (Stand 93), we find a little building partly of brickwork from the Daneshill Brick Company, with one end of it made as a complete five-light mullion window. These openings are fitted with a new type of casement, absolutely wind and weather tight, yet presenting to the eye an appearance no less attractive than the old blacksmith type made from flat bars. Of recent years the ingenuity of casement-makers had been so exclusively devoted to making the window weather-tight that they had forgotten the æsthetic considerations wrapped up with the question of the plane of the glass in respect to the casement itself. This has been corrected in the casement shown by Messrs. Hope and illustrated overleaf, which is as near perfection as can be, both in appearance and efficiency. Another side of the exhibit shows a large window suitable for office buildings, and two particularly big casements, specially designed to be glazed with plate glass.

In nothing is the exhibition richer than in the various examples of fireplaces and kitchen ranges. At Stand 208 Messrs. Benham

and Sons, Limited, exhibit two types of kitcheners, and the Wigmore Independent Hot-water Supply System, which is specially designed for use in large private houses. They also show a system of heating by low-pressure hot water, to which has been given the title of "Perfect" with more reason than such an ambitious claim generally justifies. It works by low-pressure hot water which is conveyed by very small circulation pipes that can be run irrespective of levels. In the earlier systems of this kind it was necessary that the boiler should be fixed at the lowest point in the house, but modern ingenuity has made it possible for this indispensable factor in the installation to be put on any floor and in any position.

The Carron Company (Stand 223) is an historic firm which has been making fireplaces for more than a century. It is consequently in the happy position of offering to the public grates made from the actual eighteenth century patterns carved by students of Sir Joshua Reynolds. The practical requirements of modern fireplaces have changed very much in the interval; but by judicious treatment the old models have been brought up to date without impairing the ornamental quality of the designs. Visitors should not fail to inspect the series of examples which show in so interesting a fashion the artistic debt that the twentieth century owes to the eighteenth.

The special qualities of anthracite coal, and more especially its smokelessness, demand a design of fire which shall give its advantages free play. In the "Lion" continuous burning stove, shown

at Stand 233 by the London Warming and Ventilating Company, Limited, the construction is such that the maximum radiation of heat is secured, and the stove can be fitted close to a tile front without any loss of heat. The "Florence" boiler grate is likewise very efficient, and particularly adapted for the use of anthracite, as is also the "Record" range.

The most notable change in the general design of fireplaces during the last few years has been in the direction of doing away with bars. In this reform the Well Fire and Foundry Company, Limited (Stand 224), which makes grates in accordance with Bowes' patent, has been particularly active. The



A NEW IRON CASEMENT.

company exhibits various well-known types of well fire with and without raised hearths, and at its stand are also to be seen many attractive examples of electrical fittings and wrought ironwork.

The particular attention of the visitor may very well be directed to the stand (No. 240) of the Coalbrookdale Company, Limited. The K.B. range there displayed shows a very marked advance in the economic use of heat for cooking. It is claimed for it, and with justice, that the altogether novel arrangement of the flues secures not only a clear fire for roasting and adequate heat for the ovens, but also an absolutely constant supply of hot water. This range is shown at the Coalbrookdale stand in action, and its merits are described to the visitor by the well-known lecturer on cooking, Mrs. Rea. Other interesting items are the "Tilt" fire and the No. 4 "Thrift" range. The last-named is designed in novel fashion to provide within the small space of three feet, or a little more, two thoroughly hot ovens for roasting and baking as well as a boiler which ensures an ample supply of hot water. As it is quite self-contained, it can stand out into the kitchen instead of being built in, an arrangement some housewives prefer and one which is almost universal in the United States.

At Stand 164 are to be seen various examples of the "Devon" Fires made by Messrs. Candy and Co., Limited. This type of fireplace secured the high honour of being placed first in the official tests which were carried out jointly by H.M. Office of Works and the Smoke Abatement Society. Not only are they very efficient

in a practical way, but in their variety of ceramic treatment and in the admirable treatment of their iron, brass and copper work they take a high place from the point of view of design.

The exhibit of Messrs. Richard Crittall (Stand 37) is of interest as covering the whole field of heating, ventilating and cooking. They are the sole licensees for the patent "Panel" system of heating by low-pressure hot water. This entirely does away with radiators, and provides that the room shall be warmed by radiant heat issuing either from the wall, floor, or ceiling. The advantage of this method becomes very marked in the case of rooms which are treated in any one historical style. It is manifestly hard to impart to a radiator the rich decoration of the age of Wren or the luxuriant treatment of Louis Quatorze without producing something which is perilously near vulgarity. By the "Panel" system this difficulty is avoided altogether, and on the practical side a remarkably even distribution of heat is secured. From the point of view of decoration, it is important to note that there are no ledges or crevices in which dirt or dust can lodge, and the black stains on walls and ceiling which sometimes appear in such a distressing fashion are altogether avoided.

After ranges and hot-water appliances we come to the question of bathrooms. At Stand 113 the famous firm of Doultons have an extensive exhibit of every sort of bath and sanitary appliance suitable for all types of building from cottage to palace. A part of their stand is very ingeniously arranged in the form of five bathrooms, a large one in the middle and four others grouped round it. The bathroom, perhaps, is not the place where one particularly expects to find decorative amenities; but it is worth noting that Messrs. Doulton, whose services to ceramic art have been great and continuous, have contrived to give to this very necessary feature of the home considerable dignity and charm. In the case of the more elaborate baths the material is white glazed fireclay, and in the less expensive, cast iron with a glossy surface of enamel. Not the least important aspect of the design of everything that goes to make bathrooms and lavatories satisfactory is the rigid care which has been exercised in avoiding corners or ridges on which dirt may accumulate.

Another stand at which are displayed many beautiful examples of the potter's art is No. 157, Messrs. Carter and Co., Limited, of Poole. Their

ceramic marble is a new material with a dull glazed surface, which presents great decorative possibilities. Here are also shown every sort of decorative and plain tiling for floors and walls, fireplaces in faience, and mosaics of marble, glass and ceramic materials.

Not the least of the problems which confront the owner of the house is the decorative treatment of the wall surfaces of the living-rooms. No doubt the best way of all is to employ panelling. The exhibits dealing with this



A "DEVON" FIRE.



SECTION OF "THRIFT" RANGE.

FURNITURE AND ENVIRONMENT

By "CURCULIO."

IT is certain that environment affects one's temper if it does not wholly direct one's philosophy. Show me the environment—the atmosphere—of a man's home, and I have an index to his character not to be hastily disparaged. At least, show me his tastes and ideas as expressed in his home, and I can fathom the measure of culture achieved in the occupant.

To-day it would seem that a very earnest desire was manifest in many to achieve the beautiful about them, and in furniture they find a ready means to hand. They wish to be environed by harmony, colour and artistic fitness, and to this end they realise the furniture holds a predominant note. Let the furniture be misplaced and the environment they seek is a futility.

Fortunately for all such, a few assiduous and sympathetic artists make a life study of the history and beauty, the idea and production of furniture. Such undoubtedly are Messrs. Bartholomew & Fletcher, 217-218, Tottenham Court Road, a firm holding repute as leaders, as pioneers of the movement towards beauty and comfort in the home. Let one of moderate means be anxious to furnish a house in manner that shall ensure the environment sought—if beauty and comfort define the seeking—and no firm is more likely to grasp one's wishes, formulate one's conceptions into the substantial article, than Messrs. Bartholomew & Fletcher.



They are essentially artists; to spend but a few moments in their showrooms is to arrive at full conviction of this. Here, if it be the spirit of antiquity that attracts, one is certain to be impressed by the environment their workmanship engenders. Whatever the period that may appeal, here is to be found examples in that spirit of artistry and sterling enthusiasm for the ideal so eminently exemplified in the old masters. If one is anxious for the genuine piece it is likely to be met with, and priced with a moderation that startles. If a faithful reproduction satisfies, it is to hand—often at little more than half the cost of the original.

Here, for instance, a fine old Jacobean Chest on Stand, £14 14s.; and its reproduction, remarkable in exactitude, a scrupulous copy even to the grain of the timber, £9 10s. Such example is characteristic of their showrooms, whether it be Sheraton, Chippendale, Adams—any master is here to be seen in the original—and invariably a reproduction that might bewilder even an expert in declaring its age—and at a price that at once fascinates and attracts.

Though Messrs. Bartholomew & Fletcher excel in the reproduction and adaptation of the antique, they have not neglected other branches of their craft; in the designing and construction of modern furniture they observe the same high level of artistry, the same extreme reasonableness in prices.

Should one feel a desire for beauty in the home, and yet meet with difficulty in formulating ideals to the practical, one will meet with sympathy, understanding and a hearty anxiety on the part of the firm to guide and direct—whether it be a single chair or a suite that is under consideration. Always at one's disposal is placed that experience and genius defining Messrs. Bartholomew & Fletcher as masters in their art and workmanship.

THE IDEAL FLOOR
COVERING FOR
YOUR BATHROOM.

"SILVERTOWN" INDIA-RUBBER TILING

has many advantages over ordinary marble tiling, not the least of which is its non-conductivity, which ensures a comfortable and satisfactory flooring at all times.

"SILVERTOWN" India-rubber TILING is a most artistic flooring. The most harmonious effects can be obtained with both the ordinary and the "SILVERTOWN" Patent MOSAIC RUBBER TILING. It is a floor covering of almost everlasting wear. Installations carried out 21 years ago have given no trouble, and are still in good condition. Most suitable, too, for Corridors, Billiard Rooms, etc.

We invite you to inspect the Tiling on our Stand, No. 163, Row H, at the BUILDING EXHIBITION. In any case, please write for catalogue, showing large variety of designs, in colour, to the INDIA RUBBER CO., 106, Cannon Street, London, E.C. Works: Silvertown, London, E.

Can be seen at Birkbeck Bank; Alliance Assurance Co., Ltd., Capel Court, E.C.; Cross Keys House, Moorgate Street; "Daily Mail" Offices, 130, Fleet Street; Phoenix Assurance Co., Charing Cross.



"Silvertown" Patent Mosaic India-rubber Tiling
laid in bathroom at Hyde Park Hotel.

ESTABLISHED 1834.

TELEGRAMS: "CONSTRUCT, BRISTOL."

WILLIAM COWLIN & SON

BUILDERS AND DECORATORS

Stratton Street BRISTOL

COUNTRY HOUSE RENOVATION AND DECORATION
FERRO-CONCRETE CONSTRUCTION
CHURCH RESTORATION

OAK PANELLING AND WOODWORK

STAND
No. 145
Row G

A wide
range of
Examples
of Oak
Panelling
from
1/6
per square
foot



Furniture
Staircases
Doors

Composition
Decoration

Carving

Parquet

H. C. CLEAVER, LTD.

LONDON

35c, Berners Street

MANCHESTER

4c, Albert Square

BIRMINGHAM

Prudential Buildings

And from all Furnishers and Decorators



A HALL PANELLED BY THE PYGHTLE WORKS.

historic wall-covering are numerous. They show how admirably the joiners of the present day have recovered the spirit of the old work which lay dormant for so many decades under that dead weight of inartistic motifs which we associate with the early part of the Victorian era. Many attractive examples of the wood-worker's craft, including panelling, are to be seen at the stall of Mr. John P. White (No. 155), of the Pyghtle Works, Bedford, where also there are many pleasant specimens of that garden furniture which he knows so well how to design and make.

At the stall of Messrs. H. C. Cleaver, Limited (No. 145), we become vigorously aware of the excellent results which are derived from a judicious mingling of handwork with machine-work. Panelling made entirely by hand is necessarily very costly; but the "Tudoresk" Panelling shown here makes it clear that the old reproach of "machine made" can lose its sting when the machine is properly directed. We should be very unwise to scorn its aid when with it there can be produced an excellent oak panelling which can be made, wax-polished and fixed complete at so low a cost as 1s. 6d. per square foot. Other attractive features of this stand are some beautiful wood-carving and some decorations modelled in composition from original boxwood moulds of the eighteenth century. The greatest novelty to be seen here, however, is the patent revolving door, constructed on an altogether new principle, in which the door revolves round the person entering, instead of being pushed in front of him. Though its greatest use will doubtless be found for hotels and shops, there are many spacious halls in country houses where the prevailing discomfort of draughts will be avoided by its use.

It may also be mentioned here that the stand of COUNTRY LIFE, where may be seen copies of its architectural publications, was built by Messrs. Cleaver from the designs of Mr. Lutyens.

At Stand 100 the Bath Cabinet Makers Company, Limited, have a delightful exhibit consisting of a fine oak-panelled hall in the Jacobean style. The ceiling is built up of oak joists with plaster panels, and between it and the panelling which adorns the walls is a plaster frieze. The room is equipped with furniture designed throughout in faithful reproduction of old examples. The company, however, does not pin its faith to one decorative period, for there is also to be seen part of a dining-room in the Early Georgian manner, with panelling in Spanish mahogany, oiled and waxed to a beautiful finish. This company has also made a special feature of producing inexpensive panelling of admirable appearance, which can be fixed within the London district at 1s. 6d. a square foot.

Before we pass from this rich collection of the woodworker's art, reference must be made to the exhibit (Stand 116) of Ronuk, Limited, because their work is closely related. It is an interesting commentary on the subject of the division of labour which marks modern decoration that the company specialises in the preparation and polishing of wood. In a handsome

oak pavilion, consisting of four Tuscan columns supporting a heavy cornice and dome, are to be seen examples of various kinds of wood treated by the Ronuk methods, which goes to show how important the simple question of finish can be. In these days, when there is so much internal brickwork in houses, it is worth noting that this material is particularly useful for giving a wax polish to brick floors, window-sills, fireplaces and the like.

Another exhibit which may here be mentioned is that of the British Vacuum Cleaner (Stand 176). Already the public is quite familiar with the merits of these very interesting inventions, which have now been in use for ten years, and have thoroughly demonstrated their utility. Six different machines are shown, ranging from a 2 h.p. electric motor vacuum cleaner down to several types of hand cleaners, all of which are efficient in removing dust and dirt of all kinds.

In nothing is the Exhibition richer than the large display of paints, enamels and distempers which minister to the beauty of surface decoration.

There are not very many firms who can claim to have pursued their course through seven reigns, but no less is true of Messrs. Lewis Berger and Sons, Limited (Stand 55), who have been making paints since the time of George II. Their enamel, which bears the name "Matone," combines a dull, flat finish with a capacity to be washed times without number. Here are also shown a number of beautiful stains in all colours, and a very satisfactory washable distemper known as "Maisone." Practical interest is added to the exhibit by the presence of a painter, who gives daily demonstrations of the application of the Berger wares.

Perhaps there is no better known water-paint than Hall's Sanitary Distemper, the manufacture of which has been carried to such perfection that it can be obtained in seventy different colours. Its makers, Messrs. Sissons Brothers and Co., Limited (Stand 108), are, however, equally distinguished for their paints, enamels and varnishes of all kinds. Their stand is divided into two apartments, one decorated in the Adam style reminiscent of the Adelphi, and the other with the richer treatment that we associate with the reign of Louis XV.

At Stand 177A the Japanol Enamel Company show the various products which bear that name. Experience in the use of this brilliant decorative medium goes to show that it has very unusual spreading and covering powers, and that even in unfortunate conditions of temperature, etc., it will not crack or peel.

So much for the decoration of wall surfaces; but floors must not be forgotten. The India Rubber Company (Stand 163) shows a range of attractive designs for india-rubber tiling, which forms, perhaps, the most imperishable and warmest clothing for a floor. To such perfection has its manufacture been brought that, until one feels the grateful comfort with which one walks on it, it is hardly to be distinguished from dull-finished marble slabs. It would be impossible to devise anything for halls and corridors more attractive and useful.

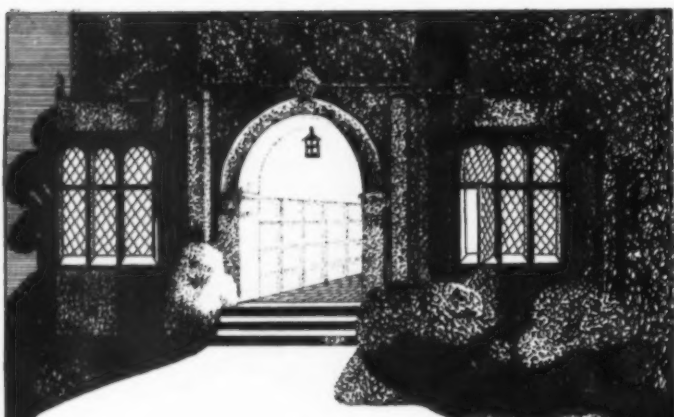
At Stand 17 Messrs. Richard Hornsby and Sons, Limited, exhibit the latest type of Hornsby-Stockport Gas-engine, which is capable of working either with town gas or with suction-producer



AN OSLER LANTERN.



FIVE DESIGNS OF "TUDORES" PANELLING.



"Country House Lighting"
By ARTHUR H. LEA

Gives full information of Modern Plants for Lighting by
ELECTRICITY PETROL AIR-GAS ACETYLENE

INCLUDING INITIAL COSTS, YEARLY EXPENSES,
ADVANTAGES & DISADVANTAGES OF ALL THE
THREE SYSTEMS, WITH STRICT IMPARTIALITY

**"Lighting, Heating & Water Supply
for Country Houses"**

A recently compiled Booklet giving much useful information.

Both the above will be sent post free
on application to

THE COUNTRY HOUSE SPECIALISTS
FOR LIGHT, HEAT AND WATER

LEA & WARREN
7 VICTORIA ST SW. WORKS KETTERING



USE
**SAXON
CEMENT**

Write for
LOWEST CURRENT PRICES
to the
**SAXON
PORTLAND CEMENT CO
LIMITED,
CAMBRIDGE.**

Manager
A.C. Davis, Esq.

Phone.
No 187 Cambridge

Wire
"Cement" Cambridge

FROM 1/6 **OAK PANELLING** 1/6



BRITISH PANELLING GUILD, LTD.
H. H. ELLIOTT Governing Director.
63, QUEEN VICTORIA STREET, E.C.

Manufacturers of
PANELLINGS, BANK FITTINGS, REVOLVING DOORS
AND ALL KINDS OF HIGH-CLASS JOINERY.

TEL: 8573 BANK.

ART WALL PAPERS



THE "CLEVES," 3/6 PER PIECE.
BRITISH MADE, IN OUR OWN FACTORY
Chas. Knowles & Co., Ltd.
144 KING'S ROAD, CHelsea, LONDON, S.W.; and 495, OXFORD STREET, W.

By Royal Warrant to
HIS MAJESTY GEORGE IV.
" " WILLIAM IV.
HER MAJESTY VICTORIA
HIS MAJESTY EDWARD VII.
" " THE KING



ESTABLISHED 1780
Telegraphic Address -
"ACTINIFORM, LONDON"
Telephone No. 3835 GERRARD

Reproductions of Old Plaster
**CEILINGS
WALL
DECORATIONS**
Chimney Pieces

G. JACKSON & SONS, Ltd.
49, Rathbone Place, Oxford Street, London, W.



By Special Appointment to
H.M. the late King Edward
VII. Emperor of India.

**LIBRARY and MUSEUM
FITTINGS,
PANELLING,
GILDING,
POLISHING, Etc.**

CASES Loaned for Exhibition
of WEDDING PRESENTS.

The Plate-room at Sandringham was
fitted with Air-tight Cabinets by

FREDK. SAGE & CO.,
58-60, Gray's Inn Road, London, W.C.

For Fifty Years we have been celebrated for the excellence of our work,
whether applied to Houses and Important Rooms in them, such as
Libraries; or to Public Buildings, Museums, etc., and we are at all
times pleased to furnish designs, and to supply Estimates free of cost.

gas. In conjunction with it is the producer-gas plant, itself of suitable size for supplying gas to the engine. Needless to say, this well-known, thoroughly-tested plant is capable of running not only dynamos for an electric-light system, but also every kind of machinery which interests the owner of a country estate, such as pumps, chaff-cutters, etc.

At Stand 168 Messrs. F. and C. Osler, Limited, show an extraordinarily attractive series of electric-light fittings in all metals and with every type of glass globe. Particular attention may be

drawn to the Pearloid glass pendant, which is cut and obscured in such a way as to give, even with metal filament lamps, the same soft quality of light that is obtained from wax candles.

The exigencies of space prevent the notice in this Supplement of other exhibits as attractive in their several ways as those described; but in next week's Supplement we shall return to the subject. Meanwhile, we may once more urge our readers not to fail to spend an hour or two at an exhibition of singular interest.

THE PLASTER-WORKER'S ART.

By F. W. TROUP, F.R.I.B.A.

THE craft of plaster-work is a very ancient one. In the form of gesso, which is a branch of the same art, it was practised by the Egyptians, but merely served as a fine ground for painting on. The Greeks used plaster in the same way to form a smooth surface on their finely-hewn but rough-textured stone, as a basis for polychromatic decoration. In mediæval times, again, a plaster more nearly akin to the material as we know it at the present day was used over the interior walling of buildings, so as to get a suitable ground for decoration.

In Roman times plaster or stucco was at first used as a basis for colour decoration. The modelling of the plaster surface



MODERN VERSION OF XVII. CENTURY MOTIF.

into relief ornament appears to have developed later; but there remain many examples of this type, such as those from the garden of the Villa Farnesina, and there are fragments in the British and South Kensington Museums. In Byzantine churches the art was practised to some extent; but in mediæval times it appears to have fallen into the background, eclipsed by the transcendent and universal outburst of the stonemason's art. Plaster-work, however, was not quite extinguished.

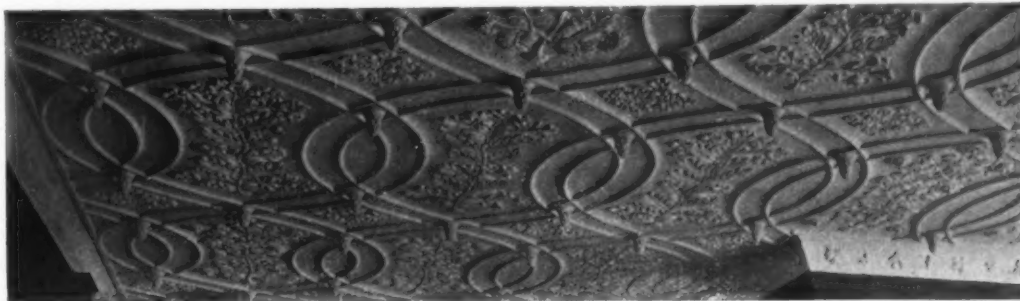
It smouldered and peeped out at intervals. Even the man who put the plain plastering on the inside of the stone walls had his little bit of fun. The coating of plaster used was very thin, not at all the modern "three-coat work." The plasterer of the Middle Ages was not ashamed of the surface left by his trowel, and avoided bringing the plaster face to dead uniformity. Not being

burdened with the thickness of three coats of plaster, he would stop when he came to the dressed stonework of a window with a 'pretty little zigzag wrought with his trowel, and forming quite a pleasant finish even without the decoration which usually followed.

In the fourteenth and fifteenth centuries we find that modelled plaster-work was being revived in France for interior decorations. Some of those wonderful chimney hoods usually in the great châteaux built of stone are to be found framed up in timber and entirely covered inside and out with plaster, elaborate figure-work and other modelled ornament appearing on the frontispiece. About the same period "post and pan" work, as it used to be called, began to be used in house-building. We commonly refer to this work now as "half-timber construction." The pan or panel was the space between the posts or timber framing, which the workmen filled with a compost of clay and straw, or sometimes with brick, and then plastered. Over the greater part of England, when oak was plentiful, this form of building became very common, and with it the modelling of the plaster was often practised. In cottage work it sometimes went no further than a simple scratching or marking of the surface, more frequently it



BASED ON EARLY WORK BUT NOT COPIED.



AT WYTH CROSS PLACE.

was stamped with wooden moulds. But it also developed into marvellously ornate and beautifully modelled plaster, as in the famous examples at Wyvenhoe, Maidstone, Canterbury and elsewhere.

In the seventeenth century a fresh outburst of decoration in plaster-work took place in this country, and very beautiful work was done on friezes and ceilings, examples of which are so numerous

HUMPHREYS, LTD.

KNIGHTSBRIDGE, LONDON, S.W.

By Appointment to the



Late King Edward VII.

BUILDINGS AND STRUCTURES FOR ALL PURPOSES, IN IRON, WOOD, BRICK, STONE, RE-INFORCED CONCRETE, OR IN COMPOSITE MATERIALS.

Churches,
Mission
Rooms,
Schools,
Gymnasias,
Squash
Racquet
Courts,
Shooting
Boxes,
Stabling,
Motor Car
Houses,
Golf
Pavilions,



Cricket
Pavilions,
Football
Stands
and
Terraces,
Billiard
Rooms,
Bungalows,
Hospitals,
Sanatoria
and
Exhibition
Buildings.

International Sports Exhibition, Vienna, 1910
(THE BRITISH SECTION).

SOLE CONTRACTORS
HUMPHREYS, Ltd., Knightsbridge, London,
AND AT
DUBLIN, BRUSSELS, TURIN, BUDAPEST, BUENOS AYRES, CAIRO.

Reproduction of Old Houses

To Architects and others



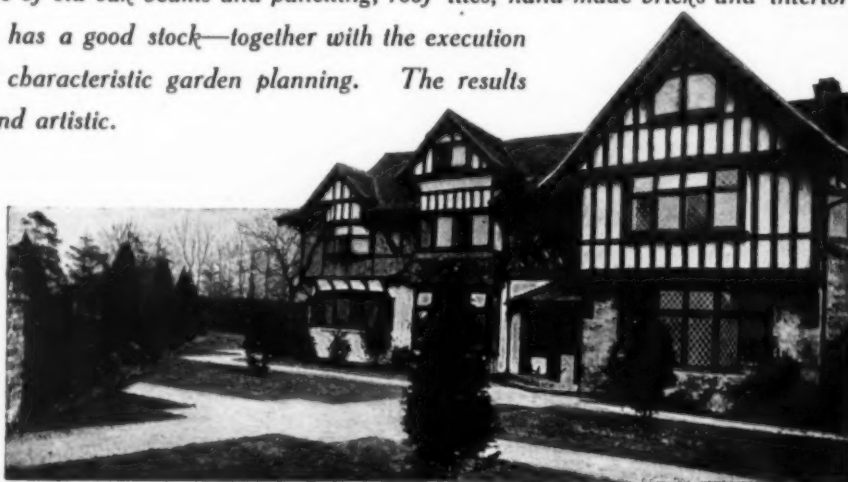
M. R. EDWARD SANDON, of 327, Harrow Road, London, W., and Elstree, Herts., has made a Special Study of **OLD ENGLISH DOMESTIC ARCHITECTURE** adapted to Modern Requirements, legitimate use being made of old oak beams and panelling, roof tiles, hand-made bricks and interior

fittings—of which Mr. Sandon has a good stock—together with the execution of appropriate decorations and characteristic garden planning. The results are delightfully quaint, restful and artistic.



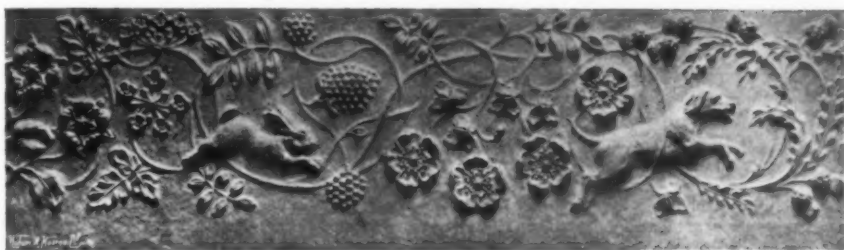
Mr. Sandon will be pleased to receive inquiries and to furnish estimates for buildings, alterations, or additions in any part of the country.

Telegrams:
"Sandon, Harrow Road, W."
Telephone:
No. 2661 Paddington.



An Example of Small Tudor Residence built by Edw. Sandon.

as to require little more than mention here. It would appear that the introduction in the sixteenth century of Italian workmen had something to do with this revival. Certainly if we set aside the Romans themselves there were never greater masters of plaster-work than the Italians, who wrought in what was called "stucco duro." Their material was so hard and well tempered as to withstand the effects of weather for centuries. Old Hardwick Hall was unroofed when the new house was built at the end of the sixteenth century; but even to this day much of the figure-work on the stucco friezes shows an undamaged surface. The English workman appears to have quickly absorbed what was useful to him in the Italian methods, and soon blossomed out on lines of his own which marked the seventeenth century as the high-water level of plaster-work in this country. In the eighteenth



FRIEZE WITH HUNTING SCENE.

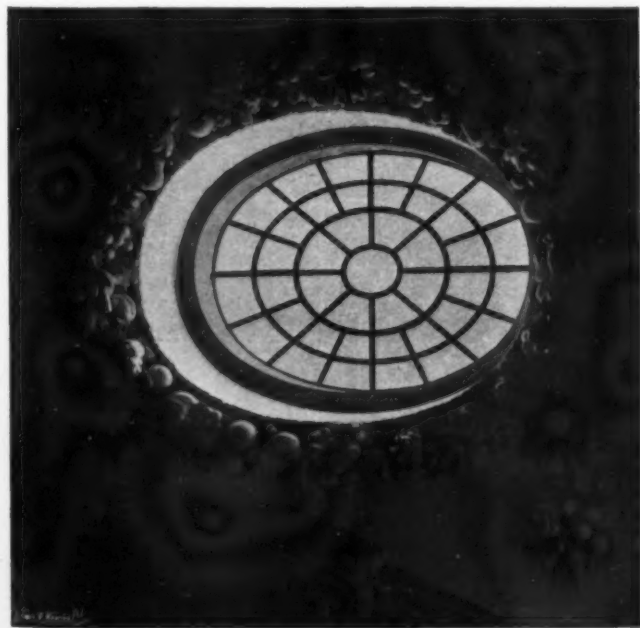
the instinct of the enthusiastic workman usually carries him straight to the finest period of its historic development. Perhaps this may not always be so, but it is true of the revival of modern plaster-work as evidenced by the beautiful ceiling designs shown in three of the illustrations. All these show to the full the freedom seen in the seventeenth century work. They have the same air of being done without wild striving and effort, and are based on, but not copied from, the early work. Of the three the ceiling at Wych Cross Place brings with it more suggestion of having adopted features from Elizabethan times. At this point we enter controversial grounds—how far is it proper to copy and reproduce? There is no question about the little frieze of a hunting scene being modern—the modelling and shape of the dogs proclaim it. But when we come to the ceiling designed in the Adams style, where stands our craftsman? This is a twentieth century revival of an eighteenth century rendering of Roman plaster-work.

It could quite easily be a mere rearrangement of the ornaments made from the actual eighteenth century moulds, some of which still exist, and in any case can easily be reproduced from existing examples of the plaster-work. The rooms so decorated may be extremely pleasant, and probably are so, but the work cannot escape the charge of being stage architecture,



IN THE ADAM STYLE.

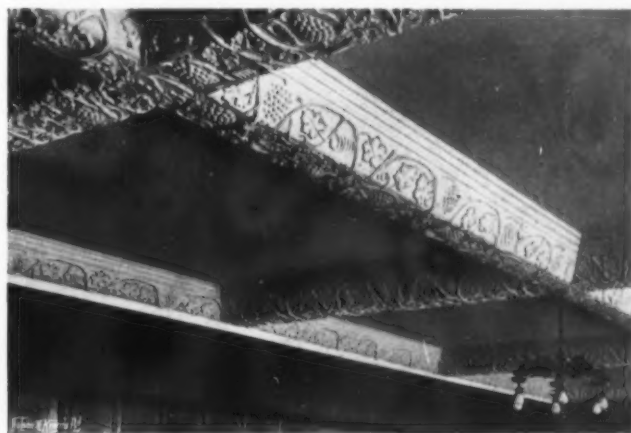
century the vigour of the movement gradually expended itself. During the Adams period it passed through a phase quite marvellous and admirable of its kind, based consciously and deliberately on the Roman plaster-work of the time of Pompeii. Only when viewed in comparison with the freer and more robust Elizabethan work could the plaster-work evolved by the brothers Adam be called decadent. When compared with the nemesis that followed in the nineteenth century it stands out as singularly refined, delicate and satisfying workmanship. A side issue of the plasterer's craft developed at this period known as "compo" ornament. It is a tough, leathery material, which was frequently applied to wood in place of carving. This form of ornament, perfectly straightforward in itself, shows the craftsman balancing on a knife-edge. One little touch in the wrong direction and he produces sham



WREATH IN THE WREN MANNER.

wood-carving; but kept within bounds, compo ornament is first cousin once removed to gesso.

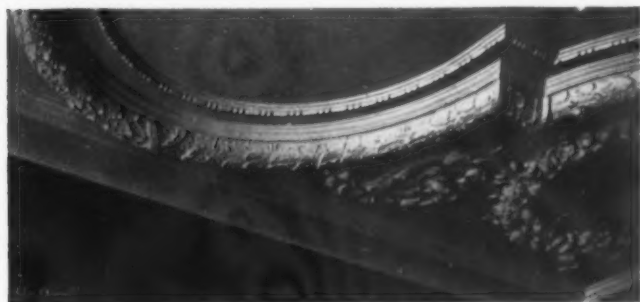
Before considering the plaster-work that is being done at the present day it is well thus to glance backwards and review the history and development of the art. We are then in a better position to gauge the quality and adjudge the value of modern workmanship and design. In the revival of a moribund craft



A TREATMENT OF BEAMS.

and the fiction, if skilfully executed, may well be so complete that only the radiators and sanitary adjuncts give away the deception which it is intended to create.

This aspect of the modern practice in the plasterers' workshops gives cause for serious thought. It arises from a position so universally taken up by the people who build, and is so often tacitly accepted by the designer or the architect, as to be difficult to combat. It is so "safe" to be able to say this is "Georgian" or this is "Empire," and many people are so sensitive to the



MODERN VARIANT OF GEORGIAN.

By Royal



Appointment.

"DUVET" CHAIRS.



HOWARD & SONS, LTD.,
Manufacturers,
25-27, BERNERS STREET, W.

TURKISH BATHS AT HOME

No form of bathing accomplishes such perfect cleanliness as the combined **HOT-AIR and VAPOUR BATH**. It not only cleanses the outer surface, but also opens the pores, eliminates impure matters, and stimulates a healthful flow of—life's principal—the blood, clears the skin, recuperates the body, quiets the nerves, rests the tired, and creates that delightful feeling of invigorated health and strength.

PHYSICIANS AGREE THAT "FOOT'S" is THE BEST CABINET

and recommend its use for the prevention and cure of Colds, Influenza, Rheumatism, Kidney and Liver Troubles, Skin Diseases, &c. A FOOT'S Cabinet possesses every desirable feature of efficiency, and has several exclusive advantages, including Improved Outside Heat and Vapour Generator, Adjustable Seat, and Heat Regulator. The Bather is not fastened to the Cabinet; Exit is Easy and Immediate; No Assistant required. Can be used in any room, and folds into a small compact space.

Our "Bath Book" No. 14, contains much interesting information not generally known about Thermal Bathing, and illustrates and describes our Cabinets in various qualities.
Sent Free on request.

FOOT'S

171, New
Bond St.
London, W.



Was your
Home
Really

Warm
Last
Winter?

If not, profit by experience, and guard against future discomfort by installing an "Ideal" Warming System NOW.

IDEAL & IDEAL
RADIATORS BOILERS

in the Home, ensure the maximum healthfulness and enjoyment at the minimum cost—in Office, Factory or Shop, they greatly enhance the quality and amount of work produced.

Prices are now most favourable, and if re-decorating or making alterations or leasing or building new premises, insist on the inclusion in the scheme of this most essential of modern comforts.

An "Ideal" Warming System banishes dampness and draughts, promotes healthfulness, effects economy, reduces labour.

Profit by this paying investment without delay! Our interesting Booklet No. 2, "Homes Healthful" (post free), contains valuable information for every house owner and occupier.

An inspection of our Showrooms is invited.

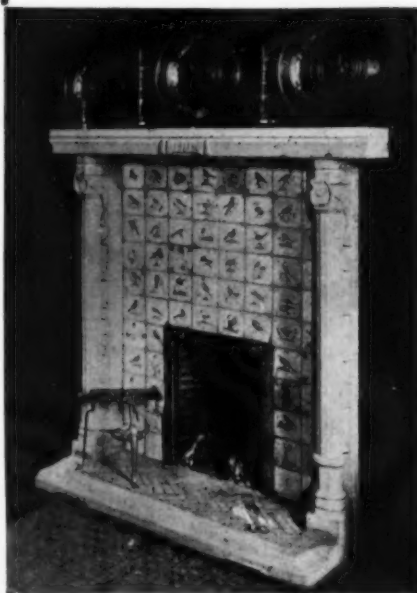
NATIONAL RADIATOR COMPANY
LIMITED.

Address Dept. 6.

Showrooms, 443, Ox'ord St., London, W.

BOWES' PATENTS

FIREPLACES



ECONOMICAL -
COMFORTABLE

over 100,000
in use in

PUBLIC AND

PRIVATE -

BUILDINGS -

all over the
world.

Write to-day for booklet, "Do be Warm,"
—or call and see the fires burning—

THE WELL FIRE & FOUNDRY CO., LTD.
21, Berners Street, LONDON, W.

ALSO

16, John Dalton St.,
MANCHESTER.

2, Church St.,
LIVERPOOL.

104, Hanover St.,
EDINBURGH.

Special Agents: NEWCASTLE-ON-TYNE—H. Walker & Son, Ltd., 55, Westgate Rd.
GLASGOW—W. Miller, Ltd., 138, Renfield Street.

rt by

t the
e the

notes

ooklet
n for



CH
sc
pe
tio
an
art
we
cov
fur
inv
wh
pro

criticism of friends that they wish to be assured that their rooms are "correct." The thoughtful designer is often in a quandary and finds himself accused of the vanity of desiring to produce "original" work. Where is this reproduction of the historical styles to end? It appears to be running through the gamut, and after the earlier revivals of last century to have reached in turn Georgian, Adams and Empire. Early Victorian is already a term to be flirted with. Must we complete the cycle and ultimately reach the *re-revival* of Gothic? Surely such a position for any craft—and it applies to others besides plaster-work—has only got to be succinctly stated to appear as little other than a *reductio ad absurdum*.

Reverting for a moment to our illustrations, one shows a treatment of beams with ornament which looks as if it had been

wrapped round the structural beam almost like wall-paper. The design is a beautiful one in itself, and no canon of art is infringed by modelling the stems and tendrils round the soft angles in plaster; but something is lost in the suggestion of strength and rigidity, which straight lines on the lower edges would at once restore.

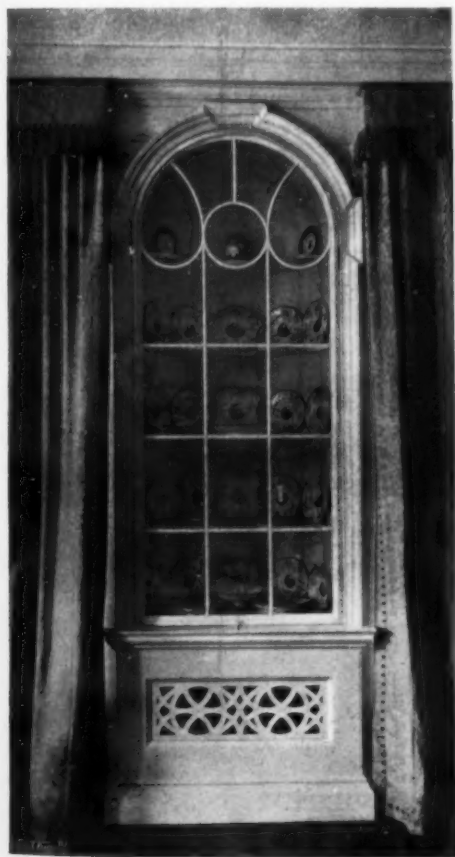
The wreath round an oval window is another example of the correct rendering of a historical style, reproducing as it does the kind of work that was carved in wood and stone by Grinling Gibbons and others in Wren's time. It is unsuitable for domestic work owing to the difficulty of keeping it clean and the danger of damaging the work in the attempt to do so.

The last illustration shows an example of plaster-work in the style usually termed Georgian, although the wreath and scroll in the corner have a flavour of nineteenth century work about them.

ARCHITECTURAL FURNITURE.

By C. H. B. QUENNEL, F.R.I.B.A.

THERE is a tendency in modern criticism of matters artistic, and it would seem a wholly wise one, to trace cause and effect in the relation of artist and client and their joint production. If it can be said that there was any real recognition at all in the nineteenth century of the labourings which preceded the birth of a work of art, or the inception of a movement in that direction, such recognition took the form only of a feeling that matters artistic were quite incomprehensible and haphazard, and arrived at their maturity in some Topsy-like way



CHINA CUPBOARD BY MR. LUTYENS.

sculpture seemed to come down like manna, and people were content to pay a shilling for a demonstration of the miracle by going to the Royal Academy.

This must all be admitted. One can hardly find any reference, outside, of course, the writings of the art critics, to matters artistic. Pictures, perhaps, were admitted to be articles possessing certain wall-covering properties, and were bought as so much furniture; sculpture consisted of lay figures, invested with facial resemblance to leading statesmen, who being defunct were unable to protest against the proceedings; and architecture—well, an architect was



AT LYMPNE CASTLE.

of miraculous growth. There being little interest in the matter, architecture, painting and

some sort of person who had to do with building, but what he really was no one knew. Foundation-stones were laid, and the buildings were duly opened, and the recognition accorded to ceremony and building exactly followed the illustriousness of the opener. As to furniture, everyone knew that you could find it designed in every style but that of the period. There was a total lack of recognition that artistic work is only possible, except in the occasional effort



IN A BEDROOM AT STANDEN.

of genius, when it reflects the desires and ideals of a period when Beauty is recognised; and as the nineteenth century recedes, it becomes more easily seen that it is best named the Age of Cheapness. If one takes its furniture alone, the feeling would seem to have been to sell to the customer six indifferent machine-made chairs for the price of, say, one good Chippendale one. One can hardly imagine that even the nineteenth century manufacturer would have had the assurance to cry his goods as better than the eighteenth century productions; so, as he could not hope that his machine would be able to equal its craftsmanship, he offered instead cheapness in all its varieties. One is not allowed to go into the economic side of the question; but there is an interesting one in the effect of such methods on the craftsman degraded to the operative, his having to give his labour in shoddy instead of good workmanship.

The side of the question which cannot be ignored is that each century has produced exactly the type of work which accords with all its other attributes. The houses built in the time of the Armada all seem worthy of having been inhabited by "English seamen of the sixteenth century," and still may be instanced as more truly English in type and plan and regard for convenience than any that have been produced since. The more rococo style of the seventeenth century is quite fittingly Caroline



A BEDROOM "FITMENT."

in character, and in the same way the eighteenth century architecture of Bath is the only possible background for the "School for Scandal." If this is so, and it would appear to be the case, it is only by a recognition of the fact that artistic work is an outcome and reflection of the spirit of the times that we can hope to be on safe ground. If the conditions are favourable, we may hope once again to do good work; if not, then cheap and nasty must continue. By this one does not mean that an artistic thing is necessarily to be reserved, by reason of its excessive cost, for the plutocrat, but that it must be made under fair conditions to the worker, and it cannot be made wholly by machinery. If it is to appeal to us as a beautiful thing, it must have some human quality about it. It need not necessarily be made wholly by hand; there may be some concession to cost of production, and there are many ways in which machinery helps in this direction; but to feed wood in at one end of an insatiate monster and expect *chef-d'œuvre* at the other is but to court disillusionment.

Mr. Vachell, in one of his recent books, is under the painful necessity of creating one of the characters with traits other than those one expects to find in woman; the lady villain has been unfaithful to her husband, and in the end is unfaithful to her lover. With great artistry Mr. Vachell has realised that if he gives her many more vices she will become a monster, and so she is in a measure redeemed, and our interest retained, by one pleasing quality that she is made to possess



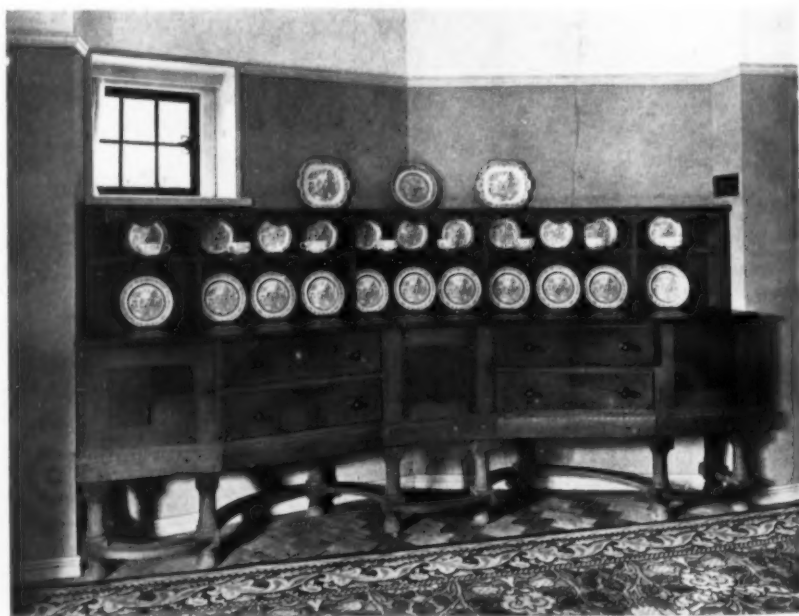
FIREPLACE CUPBOARDS AT HEATHCOTE.

—exquisite refinement of taste and sense of colour. She is described as loving "things better than persons," and true as this may be in an abstract way, in reality no one can love a beautiful thing without in some measure being interested in its producer and the ideas and feelings that have been concentered into its being.

But to abandon truisms and turn to the illustrations. The china cupboard designed by Mr. Lutyens shows a skilful use of a recess, and the glazed doors, behind which china is displayed, framed by the circular-headed architrave, make a dignified whole. The fitment gains in use, and does not lose in beauty, by the skilful way in which a heating radiator has been concealed behind the fret in the base.

Mr. Lorimer has treated the same problem, in quite a different way, in the ante-room of the dining-room at Lympne Castle. He was carrying out the reparation of a mediæval house, and consequently the panelling has the character of the period. Radiators are essential in mediæval houses, and here is one contrived in artful fashion, again with china shelves over.

Another illustration is of a fireplace and wardrobe fitment to a bedroom at Standen, designed by Mr. Philip Webb. At first sight the two parts may hardly seem to form a whole, and the inclusion of a mirror rather breaks up the unity of the surface. There may have been reasons for so doing with which one is not familiar, but a better practice is to place the mirror on the inside of the door, which can be hinged so as to open at the proper angle for use. As with all Mr. Webb's work, there are little refinements that give evidence of care; but it is individual in design rather than execution. The "fitment" in the bedroom of a house at Frinton-on-Sea, designed by Mr. Voysey, would, one thinks, have



THE SIDEBOARD AT DOLOBRAN.

gained if there had been some similar play of relief, in the way of panelling to the side or cupboard doors or some slight mouldings. It is hard in appearance—the top and drawer fronts look so rigidly machine-made that they should, if this was the method of manufacture, have been in some way relieved.

The sideboard at Dolobran, Chislehurst, designed by Mr. Curtis Green, is an interesting piece of furniture made rather to fit into its resting-place than as an actual fitment. The only objection that can be taken to it is that it seems to have been designed with more sympathy than has gone to its making; it appears as an exceedingly well-made piece, but is a little hard in execution.

Another illustration is of a bedroom fireplace at Heathcote, designed by Mr. Lutyens. The two broad pilasters at the sides stop the panelled dado to the room, and carry the moulded capping of the china shelf. The ceiling of the ingie is lowered, as it should be for the sake of proportion, and there are two good boot cupboards

at the side of the fireplace. Attention may be drawn to the ingenious arrangement of the hearth, taken right across the chimney, and the way that the white bands in it stop against the bases of the architrave to the fireplace and the side pilasters. Much painstaking care was necessary to make Mr. Lutyens's fireplace the success that it is, and there must be a recognition, on the part of the public, that many things go to the successful production of a work of art or a period of good design. Cheapness is not the sole end and aim of existence. The definite obligation, if we wish to have furniture that will equal that of the eighteenth century, is to find out more about it, and probe into the conditions of labour and craft that went to produce it. One claims no standard of morality for Art; Benvenuto Cellini was a prodigious scoundrel but a great artist, and he could be the one and yet the other, because he recognised Beauty as an asset. Our civilisation appears to have neglected it, and so we suffer; or do we think that ugliness is more respectable?

THE TREATMENT OF WINDOWS.

BY ARTHUR T. BOLTON, F.R.I.B.A.

IN one of Richard Jefferies' charming and thoughtful essays a quaint parallel is drawn between an old rustic and the cottage he inhabited. In working out the analogies of form and feature, the window is both the eye and also the clue to the character of the man. This is the essential truth as to the importance of the openings in domestic architecture, and few subjects deserve greater attention at the hands of the architect. The popular idea that large window openings are a modern improvement is a curious superstition, because in reality there is a chain of action and reaction in this respect throughout the long course of architectural history. In Bacon's famous essay on building, the case against excessive openings is presented with his characteristic sententious wit. His observations are drawn direct from the buildings of his own day. We know now that Cretan palaces of remote antiquity had large windows, and at all epochs there have been phases of birdcage architecture alternating with the opposite extreme of the dog-kennel. It is obvious, therefore, that the truth in this matter, as in others, does not reside in either extreme. Number, size and position of openings must be regulated by aspect

and by the use to which the interior is to be put. Prospect may also be a leading factor, if you will, though, in this respect, there is no substitute for stepping out of doors for the real lover of landscape. Anything beyond adequate light for the purpose of the room may easily mean glare, the most fatal defect for any interior. Surely in domestic architecture repose is the element which contributes the charm of the interiors that all instinctively admire. If the area of light and the disposition of the openings of some fine

example be analysed, it will be seen at once that the average of modern houses are hopelessly over-windowed. What usually happens is that this excess of opening leads to quantities of draperies and other darkening expedients being used in order to render tolerable an interior that verges on a conservatory. There are few cases in which it is desirable in houses to carry the openings

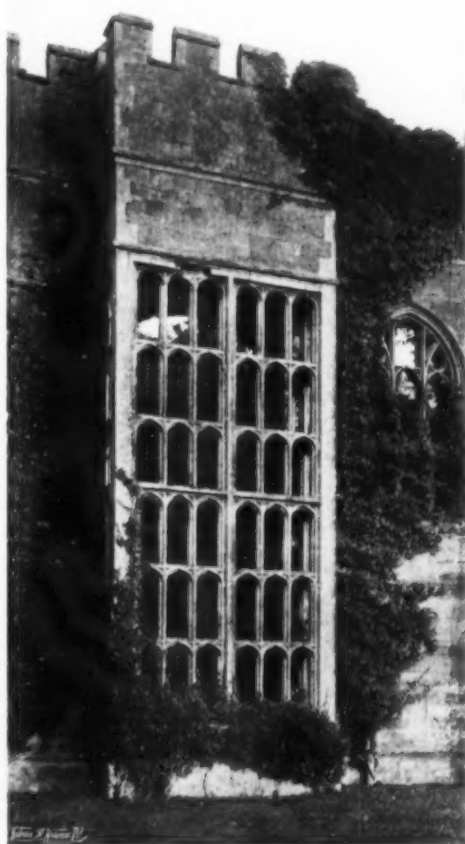
right up to the ceiling, a plan which has its merits in special buildings, like schools. One otherwise sane writer on architecture attacked the reposeful effect of the Reform Club and similar Italianate buildings because of the air-tanks that he alleged the vertical distance between the windows must create. The analogy of water and air is, however, false, because so long as a fire is burning or flues are open, the air in the room will be in motion, and will not behave like water in a cistern with the outlet halfway down. The road is therefore open for the consideration of each interior on its merits, and with some regard to the sources of effect that arise from well-studied lighting.

There is a striking saloon in one of the towers at Windsor Castle, the effect of which is due to the lighting by one large window in the end wall. On the other hand, one of the pleasantest dining-rooms owed its attractiveness to an arrangement of three windows on the short end with five on the long side. In the disposition of windows there is a great scope for art defined as Whistler maintained as knowledge. An amusing instance of the popular view occurred to an architect who had contrived a picturesque exterior from the most scientific adjustment of light to a complicated building. A client came with instructions for a house which ended as follows: "I want plenty of small windows, dotted all about, like in that building of yours; no use, of course, but they look picturesque"!

It is a curious fact that the College façade most widely admired in Oxford, the garden front of St. John's, owes much of its character to a disposition of windows and a disregard of ground-floor lighting that would be ruled out at once in any modern work. It was demonstrated once to a blind admirer of old buildings



SASHES WITH THICK BARS.



AT COWDRAY.



CASEMENTS FROM WITHIN.

whether internal or external. Obviously, therefore, there are no arbitrary conditions to be laid down, and a common-sense building-owner will content himself with requiring from the architect adequate lighting for the particular end in view.

It is a curious fact that a complete revolution of ideals has taken place in the matter of the type of window for domestic work. As a German observer pointed out, the sash window, which now so largely dominates us, is not the English window at all, but is a Dutch importation no older than the revolution that placed William and Mary on the throne. Some of the earliest sashes are those with solid frames and heavy sash-bars still in use at Hampton Court. These were the happy days when Baltic fir had not superseded oak for the finishings of doors and windows. It is worth while to enquire the reason for the displacement of the casement, round which still lingers all the magic of poetic tradition. Roses always tap at lattice casements, and Juliet never raises a sash for a parley with Romeo. The dice, therefore, are heavily loaded against the intruder, particularly in days when cottage architecture is a main source of inspiration. Half the battle of the Gothic revival hinged on this question, for although Street succeeded in his use of the sash window in the Law Courts, in general their use was banned by the revivalists. The question is still unsettled, for only a few architects, like Mr. Philip Webb, have succeeded in combining both sashes and casements in a single design. There is a general feeling that the consistent use of one or other form throughout a design conduces to unity of effect. The predominant position of the sliding sash is doubtless due to the facilities it affords for continuous ventilation without draught. Also to the trouble that arises in staying casements against high winds when opening outwards, in spite of many ingenious inventions devised for their security. There is also the further point of economics. While casements must always be made with extreme care, and are rarely satisfactory and dependable unless of hard

wood or metal, common deal sashes will be adequately rain and wind proof. Should they rattle, they are easily wedged, whereas an ill-fitting casement will give endless trouble. Much of the prejudice against sash windows arose from the concurrent development of plate-glass, which led to the cutting out and omission of the sash-bars, which are essential to the scale and surface effect of the surrounding walling. A sash window deprived of its tracery of bars made a dark and gaping hole in the wall, faintly divided into two equal parts by the indispensable meeting rail with an emphasis on the great defect of the form, viz., that the upper sash is on a different plane to the lower. In the Houses of Parliament an ingenious contrivance of metal sashes was adopted by which both sashes when closed are in the same plane. Where casements are employed, it is wise not to make them tall, but to put a metal transom bar and have an opening portion above for ventilation, hinged at top or bottom or on centres, as required. Tall casements are not only more expensive, but are far more likely to be warped or twisted, and they need more complicated fastenings. Many ingenious devices are available for obviating the cleaning difficulties that exist both in sashes and casements. The type known as "French windows" used to be much affected by ladies, on the plea that it was "so nice to step out on the lawn." One glazed door is, however, adequate for that purpose, and a series of windows glazed to the floor-line will be found to lower the temperature of the room greatly, and to cause currents of cold air in the worst of all directions. The domestic cat will be found seated on a footstool before the fire in a room so arranged, having too much sense to run the risk of an inevitable chill. In old-fashioned Kentish houses may be seen sash windows which close on dwarf doors side-hinged for egress, and yet useful as a

check on the exit of the baby or the entrance of the dog. So much interest surrounds the window and its treatment that these brief notes might be extended indefinitely without exhausting the subject. They are a simple plea for unprejudiced observation and thought, whether by client or architect, on a very vital problem of domestic architecture.

SASHES AND CASEMENTS MINGLED,
BY MR. PHILIP WEBB.

THE KITCHEN & ITS EQUIPMENT.

BY HERBERT T. BUCKLAND.

SINCE woman's wit divined that the way to man's affection is "to feed the brute," the art of cookery has made considerable strides, and to-day the kitchen and its attributes receive the attention they deserve. The same guiding principles should regulate the arrangement of a modern kitchen department for a large household as are paramount in the planning of a factory, the object being the same, viz., to transform the raw material into the finished product with as little wasted labour as possible. If the joint, fish, or *entrée* can be taken from the man at the door and set cooked and garnished at the table without unnecessary wandering, a long step is made in the right direction. To this end the kitchen plan contributes more than anything else. Tradesmen's entrance, larder, kitchen, servery and dining-room must be in proper sequence. The plan appended shows an arrangement which has been found to work well in practice. The raw material is delivered at the tradesmen's entrance and

taken either to the larder or direct to the kitchen. Here it is cooked and passed through the sliding sashes into the servery, thence to be transferred to the table. Attendant upon the preparation and service of food, there is so much to be done in the way of washing up that convenience in this department is of great importance. It is almost unnecessary to point out that, the shorter the distance china and other breakables have to be carried, the less likelihood there is of breakage, and certainly the less labour. The more closely, therefore, cooking and wash-up arrangements are grouped in connection with the dining-room the better. In the plan shown it will be observed there is no scullery, but a working kitchen with a recess leading from it containing a sink, at which the particularly greasy washing up can be done. The sink in the serving pantry is intended chiefly for the washing of glass and plate. There is a growing tendency in planning houses of even a moderate size to dispense with a scullery and treat the kitchen entirely as a

ad
an
ce
of
h-
ne
of
to
is
a
an
h
re
al
n,
ts
ed
y
es
as
ea
s,
ed

0,

o
e
e
d
n

d
o
d
g
e.
e
d
e
d
n
h
y
y
is
e
a

EXPANDED METAL LATHING

STRONG, DURABLE, RIGID, ECONOMICAL.



PRESIDENT AND LORD MAYOR'S PAVILION. THE CORK EXHIBITION, 1902.

Hollow Walls of Wood Studs, Expanded Metal Lathing, and Cement Plaster.

MR. ARTHUR B. HILL, F.R.I.B.A., CORK, Architect.



SPECIALLY SUITABLE

FOR

Light Framed Buildings

INCLUDING

ESTATE BUILDINGS, BUNGALOWS,
CLUB HOUSES, COTTAGES, ETC.

Call at Stand 156, Row G,

AT

The Building Exhibition, Olympia, London,

APRIL 22 to MAY 6.

Stand Telephone No. 4732 Kensington.

THE LATHING IS RETAILED BY MERCHANTS ONLY

WRITE FOR PARTICULARS AND PRICES—

THE EXPANDED METAL CO., Ltd.,

York Mansion, York Street, Westminster, London, S.W.

Telephones: 810 Gerrard. 1514 Victoria.

Telegrams: "DISTEND, LONDON."



HOPE'S

"TUDOR" Casement

is a traditional type of metal window perfected in its weathertight and wearing qualities, and provided with Hope's Patent Two-point Casement Fastener which allows of ventilation without rattling. We can thoroughly recommend it to those who admire metal casements of the old style, but who very properly object to the many defects so often associated with them.

HENRY HOPE & SONS LTD

39 Victoria Street, Westminster
Works: BIRMINGHAM

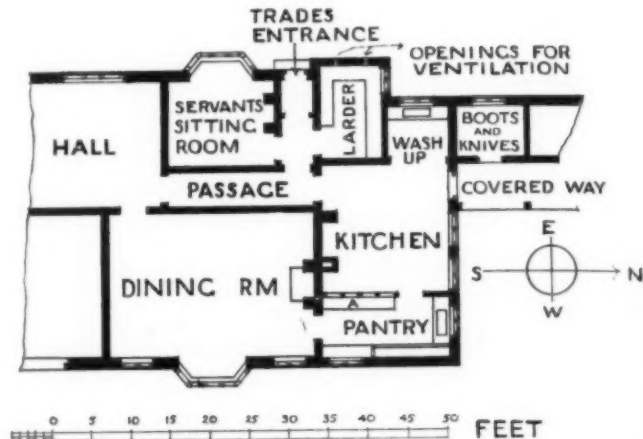
See our Stand No. 93 at Olympia

working apartment, providing a room for the servants to use as a sitting-room, an arrangement which has many advantages.

When one considers that the serving of a dinner for eight people involves the supply of about five dozen plates, to say nothing of dishes, plate and glass, one begins to realise the importance of getting these to and from the dining-room conveniently. To this end it is advisable to have the china cupboards as near to the dining-room as possible. In the plan under consideration, all the china, glass and plate is kept in the serving pantry, plates and dishes in a hot cupboard under the serving hatches marked A. This cupboard can be opened from both sides, so that after washing at the kitchen sink they can be put in at one side and taken out in the servery at the other. It can easily be heated by a coil of pipes in connection with the boiler at the back of the range, or by gas.

The whole point of the arrangement is circulation, and it will be seen that this can be achieved. Dinner served, the plates removed after the first course are passed either through the serving hatches into the kitchen or to the servery sink. When washed they are returned to the hot cupboard, and are ready for use again when required as near as possible to the hand of the servant in the dining-room. Each dish can pass direct from the hands of the cook to the parlour-maid if necessary; but should there be any waiting, it can be placed in the hot cupboard.

As regards the best finish for floors and walls of kitchen, pantry, larders, etc., it goes without saying that a material which holds dirt as little as possible and can easily be washed is the best. On this account tiles for floors are good, but they are also hard and

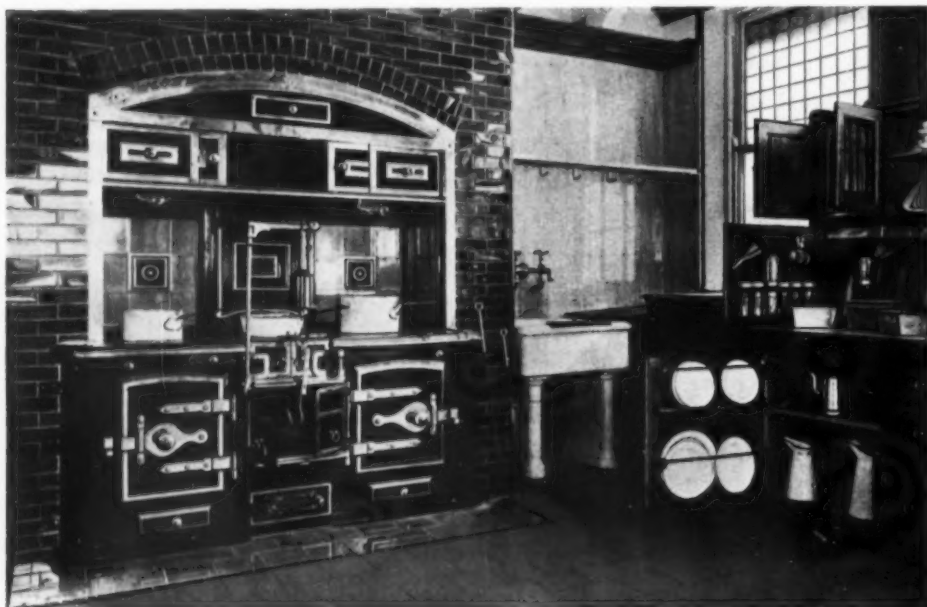


PLANNED FOR EASY SERVICE.

by some. Space will not permit more than a passing reference to the subject of cupboards. A word, however, with regard to sliding doors may perhaps be permitted. They can be made to run smoothly, but a deal of care is necessary in fitting them. If they are afterwards inclined to stick, it is a good plan to soap the runners.

Not the least important item in the kitchen is the range.

One is usually reminded of its existence in the early morning, when the cook is inclined to bully it under the pretence of cleaning out the flues. To a casual observer a kitchen range is just a grate with a fire and an oven on either side. It is, in fact, more complicated than it looks, and not a little ingenuity has been expended upon its design and construction. Since the kitchener supplanted the old-fashioned hob grate, meat has usually been baked in the oven, owing to the fact that a range fire is not suitable for roasting. Most people have submitted to this, but under protest, and still maintain that roast meat is preferable to baked. Consequently, the functions of a range have been limited to two things—if one disregards its use as a grate—viz., baking and providing a hot-water supply, the last being effected by what is known as a back boiler. The ingenuity of man has, however, risen to the occasion after many years, and we are again to be allowed our roast meat while retaining the advantages of a range. A photograph and sectional drawing show how this can be achieved, i.e., by setting the boiler over the hottest



RANGE WITH ROASTING FIRE AND NEW TYPE BATH BOILER.

tiring to stand upon. There is now a variety of materials which claim to be kept clean as easily as tiles and lack this disadvantage. The basis of their composition is sawdust, and they can be laid in the form of a paste either on boards or concrete. When laying floors of this description it is easy to form a coved skirting to prevent the harbourage of dust or dirt.

For walls nothing is better than glazed tiles or bricks. Wall tiling is not cheap, roughly 10s. a square yard, and one usually has to be content with something not quite so near perfection. Oil paint finished with enamel or varnish is the next best, but in any case the walls in the immediate neighbourhood of sinks and shelves should be tiled. A considerable diversity of opinion exists as to the best type of sink; some prefer porcelain enamelled, others wood lined with lead. The first is supposed to lead to excessive breakage of glass and china. Lead-lined sinks have the disadvantage of holding grease badly and being difficult to keep clean. Porcelain is probably best, and if a large enough one is chosen it will be possible to use a papier-mâché bowl within it for washing up glass and so obviate undue breakage.

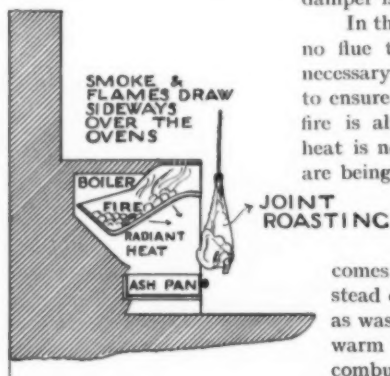
In kitchen and scullery sinks a similar practice can be adopted with advantage. Good drainer accommodation is necessary, and for the purpose either teak or birch is suitable, although a lot of scrubbing is needed to keep them sweet. Pewter is preferred

part of the fire, viz., the top. Consequently the water is always being heated without any attention from the cook, thus saving the expense of an independent boiler. The under side of the fire is used for roasting, toasting and grilling.

The arrangement is ingenious, and has other points worthy of attention. In the generally adopted type of range shown in the second photograph there are three flues. The heat passes through the central flue and the back boiler when the middle damper is drawn out, and through the side oven flues when the middle damper is closed and the side ones are drawn out.

In the range of which a section is shown there is no flue through the boiler, consequently it is not necessary to starve the ovens at dinner-time in order to ensure a hot bath, if one is required then. The fire is always in contact with the boiler, and the heat is not diverted from it even though both ovens are being worked to the full or when roasting is in

progress. This is undoubtedly a great point. Furthermore, in the later type of range all air admitted to the fire comes from underneath and through the fire, instead of through the front bars and over the fire, as was formerly the practice. In the result only warm air goes through the flues, the very best combustion of fuel is obtained, and the flues are of such a form that they are almost self-cleansing. It has been very clearly proved that such a range is



SECTION THROUGH FIRE OF NEW RANGE.

THE K. B. RANGE

MANY HUNDREDS ALREADY SOLD



LONDON—1910

PLACED FIRST by the PUBLIC VOTE at the "IDEAL HOME" Exhibition.

HIGHEST AWARD AT SANITARY CONGRESS, BRIGHTON : : : 1910

The RANGE which—

GIVES CONSTANT HOT WATER without any attention whatever. No Boiler Flue to clean.

ROASTS, GRILLS & TOASTS with the bottom heat of the fire, which in other ranges is lost.

SECURES A LIFTING FIRE'S ADVANTAGES without its mechanical action and consequent dust.

CONSUMES ITS OWN SMOKE

With a **K. B. Range** ROASTING IN FRONT OF FIRE, which is undoubtedly the perfect method, BECOMES A SIMPLE and ECONOMICAL OPERATION.

An eminent F.R.I.B.A. writes:—

"The 'K. B.' Ranges which you have supplied to my various clients have proved a complete success, and undoubtedly they possess all the advantages you claim. I consider the ranges quite revolutionary in character, and shall continue to use them."

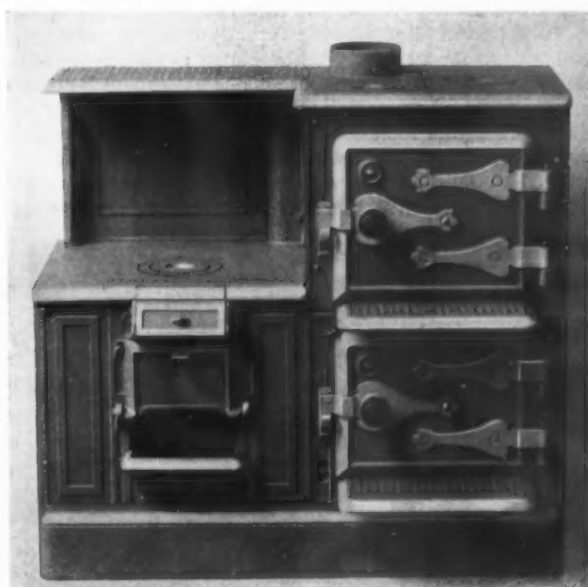
The following are a few of the Addresses where the K. B. Range may be seen DAILY AT WORK:

LONDON—	BRIGHTON—	EXETER—	BIRMINGHAM—	NEWCASTLE-upon-TYNE—
The Coalbrookdale Co., Ltd. 15 & 16, Rathbone Place, W.	Packham & Sons 144, Western Road	Wippell Bros. & Row 243 & 244, High Street	The Griffin Foundry, Ltd. 9 & 10, Stephenson Street, New St.	Emley & Sons, 42, Westgate Road

"No. 4 THRIFT" RANGE

This is a Double Oven Self Contained Range, specially designed for medium sized houses or as a secondary range in large houses, and occupies little room.

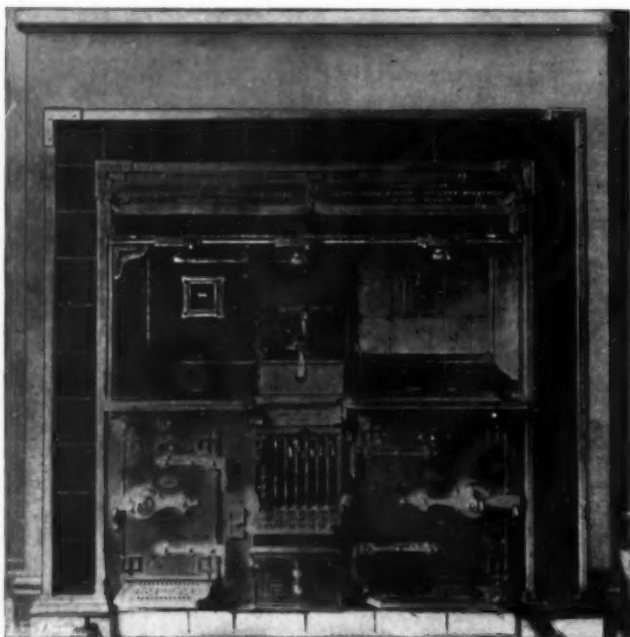
As with the K. B. Range, the THRIFT gives constant hot water without any attention whatever. No boiler flue to clean.



The Coalbrookdale Co., Ltd., Coalbrookdale, Shropshire
LONDON SHOWROOMS: 15 & 16, RATHBONE PLACE, OXFORD STREET, W.

capable of maintaining an admirable hot-water supply even when cooking is in progress. This leads us, naturally, to the consideration of hot-water supply. In most houses even of modest size the old form of back boiler in the kitchen does not supply a sufficient quantity of hot water, and there is a growing tendency to adopt a system with an independent boiler. Some engineers maintain that the latter can be employed with advantage, especially where a large supply of hot water is required; this, however, means some additional expense.

With the exception of large opening windows, the ventilation of the kitchen does not receive the attention it deserves. The heat of the range and the steam from cooking and washing up render it important that some provision should be made not only for letting in fresh air, but for getting rid of steam and foul air. If windows are kept open there is no difficulty about inlets, but it is desirable to supplement the air supply if this cannot be relied on. For this purpose small openings in the external walls should be provided just above the skirting level, filled on the outside with a perforated brick, stone, or terra-cotta grating, and on the inside with what is sometimes called "a tuttle grate," which has small metal louvres which can be opened or shut. The best means of getting rid of the foul air is to provide a fairly large flue adjoining the smoke flue from the range, with an opening from the kitchen



ORDINARY RANGE WITH THREE FLUES.

Fine gauze, either of linen or wire, is essential for the purpose, and frames filled with this should be fitted to all vent openings and to the windows.

The limits of an article of this description prevent any attempt to deal with many things which make for comfort and convenience in such an important department of a household. The few essentials touched upon will afford food for thought to everyone who has embarked upon the building of a house, or contemplates doing so.

as near the ceiling as possible, fitted with a similar tuttle grate. The heat from the chimney flue will induce an up current in the ventilation flue, and the hot air which always collects near the ceiling will be drawn up. The up draught will also induce the fresh air to enter through the fresh air inlets, and a constant sweeping out of the warm air will be the result.

The ventilation of larders can be effected in a similar way, except that it is not necessary to have a flue for extraction. Openings with gratings as high up and as low down as possible will do all that is necessary, especially if the larder is placed at an angle of the house so that two outside walls are available for the ventilation openings. A point of importance in connection with the windows of a larder, which, it need hardly be said, should face north, is to prevent the entrance of flies, wasps and other creatures.

BATHROOMS IN COUNTRY HOUSES.

By H. D. SEARLES-WOOD, F.R.I.B.A., F.R.SAN.I.

THE treatment of the bathroom has not received the attention it deserves. In too many instances the bath is put in a room of the smallest possible dimensions, and insufficient space is left for any other furniture. The

bathroom should be large enough to allow of the use of dumb-bells, Indian clubs and other apparatus for health exercises. Where possible there should be a window on two sides of the room, so that these exercises can be taken in fresh air. In addition to the ordinary bath (technically called "slipper") it is convenient to have enough room for a lavatory basin and an electric lamp bath or domestic Turkish bath shown in one of the accompanying illustrations. If a shower-bath is to be provided, it is much better to have this in a separate room if possible. Shower-baths attached to slipper-baths are never quite satisfactory, and if many baths are wanted in the morning before breakfast, the shower-bath can be used as well as the slipper-bath, and is not so long in use by each

person. The floor should be made of some impervious material, so as to avoid the unsightly lead safe under the bath and lavatory basin, which can never be made to look clean, and is always an ugly feature. A better-looking material for these safes is enamelled iron, which can be kept clean and looks neat. There are several jointless flooring materials made of a

mixture of sawdust and cement, but they nearly all contain magnesium oxychloride. This usually contains free magnesium chloride, which is hygroscopic and gives unsatisfactory results. Rubber tiles are satisfactory, but it must be borne in mind that if such materials are laid on wooden floors carried by wooden joists, the lack of ventilation to the floor brings the danger of dry rot. The point to be aimed at is to get an impervious flooring that will not be slippery or strike cold when walked on with wet feet. Linoleum meets the case, but in plain colours shows every mark, while hardly any of the decorated ones are



BATHROOM WITH TILED WALLS.



BATH WITH ACCESS TO BOTH SIDES.



JARRAH AND AUSTROAK FOR FENCING & GATES

CHEAPER THAN OAK.

THE MOST DURABLE WOODS IN THE GROUND. Require neither Paint nor Creosote to prevent decay.

Illustrated Catalogue and Prices from

MILLARS' KARRI & JARRAH CO. (1902), LTD.,
PINNERS' HALL, LONDON, E.C.

STAND Nos. 21 and 22, BUILDING EXHIBITION, at OLYMPIA (Gallery).

SANITARY ENGINEERS

BY SPECIAL APPOINTMENT

to His Majesty
and to Her Majesty



KING GEORGE.
QUEEN ALEXANDRA.



GEORGE JENNINGS, Ltd.

BATHROOM FITTINGS FOR
VILLAS, MANSIONS, PALACES,
HOTELS AND INSTITUTIONS.

63 to 67, LAMBETH PALACE ROAD,
LONDON, S.E.

Telephones—Hop 3600 & 3601.



MANY a beautiful terrace is spoiled by using badly designed wicker chairs, which lack the dignity of good furniture. The group of Dryad Furniture above illustrated will show that refinement and distinction of style which can only be found where the skilled craftsman gives intelligent attention to detail, and this is what makes the Dryad work quite different from the usual trade article sold as wicker.

Gold Medal Anglo-Japanese Exhibition.
Silver Medal Brussels Exhibition.

Illustrated Catalogue of designs post free from
C dept. Dryad Works, Thornton Lane, Leicester

WE MAKE A SPECIALITY OF LUXURIOUS OR SIMPLE INEXPENSIVE MODERN BATH ROOMS

Combined with
High-Class
Plumbing,
Efficient Hot
Water Supplies,
Heated Towel Rails,
Guaranteed Drainage.



BEAVEN & SONS LTD

27, VICTORIA ST., WESTMINSTER, S.W.

AND AT GLOUCESTER
AND NEWPORT.

Telephones: 798 & 799.

Telegrams: "Sunningend."

H. H. MARTYN & CO., LTD.

Sunningend Works :: Cheltenham

LONDON—
192, Albany St., N.W.

MANCHESTER—
6, South King Street

GLASGOW—
30, George Square

THE FINEST CARVERS IN THE WORLD

Country Life writes:—"We did not know that such carving could be executed at the present day."

FIBROUS PLASTER
STONEMWORK

WOODWORK
METAL WORK

Executed for all parts of the world
and the leading Architects of Great Britain



BATH WITH EBONY FRAME.

satisfactorily designed. All bathroom floors should be finished with rounded angles, to facilitate cleaning.

It is the common hospital practice to place baths with access to both sides, so that the patient can be helped on either side of the bath if necessary. The first illustration shows this method of fixing a bath in a private house. It certainly has advantages, as it is possible to get to both sides of the bath to clean the floor properly, which is difficult when the bath is against the wall. The type of bath is also good, the splayed base making it easy to clean round the bath. The drawback to baths standing on a base like this instead of feet is the difficulty of getting at the waste-fittings, and porcelain baths in private houses have the effect of chilling the hot water when first used. The form of overflow shown in the illustration is open to the objection that every time the bath is discharged the soapy water rises in the tube and some of the soap is deposited on the inside. Unless attended to, this is apt to become offensive, as the overflow is hardly flushed out by use as an overflow. The tubes should be made so easily detachable that they can be regularly taken out and properly cleaned out to prevent their becoming an offence. Probably an overflow taken from the top of the bath and treated as a warning pipe, taken straight through the wall, is the most sanitary method. The towel-dryer shown has three live rails and is of a good type, but the lowest rail is so near the floor that it would not be available for hanging towels on. The illustration of the "bathroom with tiled walls" shows another type of bath with the taps detached and the pipes placed behind tiling; the white ledge surrounding the bath is convenient for placing soap and brushes on while the bath is in use. It, moreover, prevents the splashing getting between the wall and the bath, and affords sufficient room to clean the space behind the bath. The waste and pipes in both these illustrations would be best dealt with from the room below. The position of the towel-dryer is conveniently near the bath, and the third rail is high enough to be available for hanging towels.

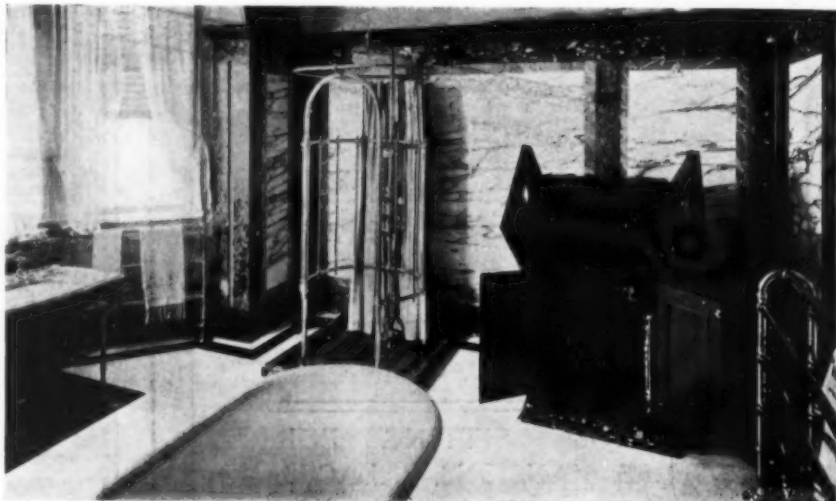
The bath with ebony frame shows an unusual and charming treatment. The top is marble and behind the framework of ebony hangs a very pretty chintz. The effect is excellent, and the drapery and framing being made easily removable does away with all the sanitary objections which are justly raised against most bath enclosures. One feels that the drapery must often be taken out and shaken, and the space enclosed properly attended to, so that these objections are fully met. The sense of warmth and colour and a certain feeling of softness add to the charm. Everybody approaches the cold bath in the morning in a spirit of sacrifice, which the chilly appearance of most bathrooms tends to heighten, but a cold bath so quaintly disguised as this would be robbed of half its terror.

The main point to be looked to in lavatory basins is that the overflow should be accessible. Many basins fail in this respect, and as a rule those with skirtings are to be avoided, because it is difficult to make a satisfactory finish between the skirting and the wall, while the angles formed by the skirting are apt to accumulate dirt. There are many good forms of plugs,

but the detachable plugs, which in some respects are the best, have the drawback that they are not ornamental, and are, moreover, liable to damage the basins. Taps with long bibs are also not particularly decorative and might be improved on. There are several good mixing valves which can be used instead of these taps. If it is wished to get away from the bib tap, the water can be brought to the basin below the top with a rim flush, which helps to keep the basin clean. These basins can, if desired, be bracketed out from the wall without any iron frame or supporting legs, and as many of these frames and legs are badly designed, the bracketing is probably the best method to adopt.

If possible, the bathroom should have a fireplace. A fire in the bathroom is often enough to turn the scale on a cold winter's morning on the question of cold tub or no cold tub, and thus has a moral influence which is all to the good. Even an electric fire has been found enough for this purpose, but it does not appeal quite in the same way as an open fire.

When hot spray baths are used, there is a certain amount of steam generated, and unless there is good ventilation there will be condensation on the ceiling and walls. If the ceiling is of plaster, this will soon show by discoloration. The walls of the complete bathroom illustrated are lined with marble, which is now being used for this purpose and is quite suitable. It forms, however, an impervious surface which is liable to produce condensation if the ventilation of the bathroom is not good, but an open fireplace and good ceiling ventilation will prevent this. If the walls are of plaster, some kind of impervious surface is wanted to take the splash of the bath, and the tiles shown in an accompanying illustration are good for the purpose, also the many forms of glass tiles and vitreous slabs and mosaics. Tiled window-sills are useful and better than wooden window boards, as they do not mark it



A COMPLETE BATHROOM WITH ELECTRIC BATH.

used for soap, brushes or hot-water jugs. The treatment of the curtains in the first illustration is interesting. The lower curtains being hung on a rod fixed to the parting bead allows these to be drawn and the top curtains left, thus making it unnecessary to obscure the glass in the lower sash, as is so often done, and which calls notice to the fact that the window lights a bathroom.

REINFORCED CONCRETE FOR COUNTRY ESTATES.

By H. KEMPTON DYSON, C.E.

IN the last fifty-five years there has been a gradual growth of a novel form of construction, which only began to show real development in this country in the past ten years. This revolution in construction, for it is no less, is not yet in full bloom. Concrete has often been used in conjunction with steel to protect it against fire and corrosion. The new method of construction, called reinforced concrete, is, however, very different to ordinary steelwork, though it employs steel in conjunction with concrete. Steel is a material strong both in tension and in compression; concrete, on the other hand, is comparatively weak in tension, but strong in compression—in other words, it is strong but brittle. For resisting compressive forces concrete is much more economical than steel, provided that its greater bulk does not preclude its use. In a reinforced concrete

SEASONED ENGLISH OAK

The finest of all English Woods for Panelling, Doors, Staircases, Gates, and every description of Joinery.

An immense stock of thoroughly dry and well-seasoned English Oak is always kept in stock, from $\frac{3}{4}$ -in. thick upwards, fit for immediate use in carrying out joinery contracts of any size, to architect's specifications and details.

Visitors to the Building Trades' Exhibition are invited to inspect our Stand, No. 155, Row G.

JOHN P. WHITE, THE PYGHTLE WORKS, BEDFORD

THE "CARTER" FIRES

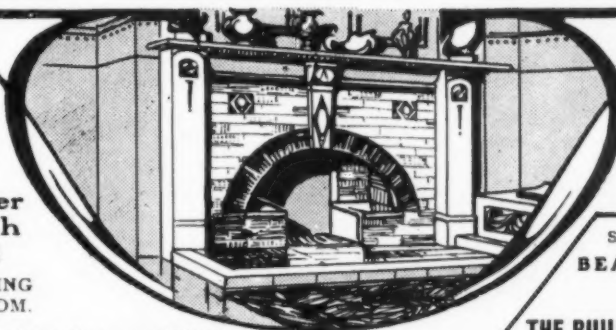
The chief points of excellence are:

**Beauty of Design,
Clean and Bright
Appearance,
Great Heating Power
combined with
Economy of Fuel**

ADAPTED TO ANY OPENING
AND SUITED TO ANY ROOM.

Illustrated Catalogue free on application.

CARTER & Co., Ltd. POOLE, DORSET



Enquiries are also invited for

**Floor, Wall, and Hearth
Tiles,
Ceramic, Marble, & Glass
Mosaic, Faience, and
Terra Cotta.**

STRIKING EXAMPLES OF OUR
**BEAUTIFUL FIREPLACES
AND TILES**

ON VIEW AT
**THE BUILDING TRADES' EXHIBITION
OLYMPIA,
Stand No. 157, Row G.**

REINFORCED CONCRETE FOR BRIDGES, RESERVOIRS, ETC., ON PRIVATE ESTATES.

Wooden bridges quickly decay—Iron bridges besides being unsightly are very perishable and need constant and costly attention. A reinforced concrete bridge on the KAHN SYSTEM, not only has a nice appearance, but is impervious to the weather conditions to which it is exposed—needs no painting or repairs—can be constructed to carry any load.

The KAHN TRUSSED BAR



is undoubtedly the finest reinforcement for concrete for ESTATE WORK. The building of any structure in reinforced concrete is rendered quite simple by the use of the Kahn Bar, which can be handled by unskilled labour.

Readers of "Country Life" are invited to visit
STAND No. 153, Row G.

**BUILDING TRADES EXHIBITION,
OLYMPIA, where the KAHN SYSTEM is demonstrated**

ILLUSTRATED HANDBOOK sent FREE on request.

The TRUSSED CONCRETE STEEL Co., Ltd
78, CAXTON HOUSE, WESTMINSTER, S.W.

DOULTON'S MODERN SANITARY APPLIANCES



THE "DOULTON" BATH ROOM

Our Latest Designs in Model Bath Rooms are being shown during the next fortnight at the
BUILDING EXHIBITION :: OLYMPIA

High-class Sanitary Fittings of all kinds can be seen in action at the Showrooms, Albert Embankment, S.E.
Special Sectional Catalogues on Application.

DOULTON & CO., LTD. :: LAMBETH, S.E.



CATTLE STALL DIVISIONS.

the brittle concrete is counteracted. In arch construction we may have either pure compression or a combination of bending and compression; in either case the reinforcing of the concrete by small sections of steel is very advantageous. In general, considerable economy in first cost is effected, while, furthermore, the concrete (which is made with Portland cement and broken stones or gravel and sand) has the property of protecting the steel from corrosion and renders the structure fire-resisting, so that economy is effected both in the upkeep of painting and in reduction of fire risk. Reinforced concrete will serve in almost all cases in place of steel, stonework, brickwork, or other structural material.

Reinforced concrete has been applied to so many and varied purposes, and has made such tremendous strides, that it is difficult to forecast its future limitations. Even where there is no saving in first cost, reinforced concrete is often preferable to other materials,

beam steel is put on the tension side, embedded in the concrete, which itself serves to take the compression; in the combination, therefore, both concrete and steel are serving the functions for which they are respectively adapted in an economical way. If steel is introduced into a concrete pillar, the tendency for the tensional forces to snap

because of its durability, its fire resistance, hygienic quality and general efficiency. In the present article a few of the applications of reinforced concrete in estate work will be described, though, of course, at this stage the list cannot be exhaustive, for every day it is being put to fresh uses.

In the construction of country mansions reinforced concrete is very suitable for constructing floors and roofs, which are thus made fire-resisting and durable. Often buildings have to be erected on very soft and treacherous subsoils; here thin rafts of reinforced concrete can be constructed which distribute the weight of the building evenly over a large area. Though the advantages thus secured are very considerable, the amount of steel is notably small in all reinforced concrete construction, amounting only to about one per cent. in bulk.

Internal staircases have been built in reinforced concrete, as well as flights of external concrete steps for gardens and terraces. Reinforced concrete cow-

houses, piggeries and chicken-houses have been found of advantage, as also fruit-houses, greenhouses and root cellars. The roofs of such buildings are constructed of slabs and beams of concrete with steel rods embedded therein, such roofs



CONCRETE STALLS IN STABLE.

By Royal Warrant



To H.M. the King.

POLISHED FLOORS. RONUK, Ltd.

are prepared to Estimate for the
Polishing and the maintenance of
all kinds of floors in

PRIVATE HOUSES AND INSTITUTIONS.

Write for Pamphlet.

SEE STAND, No. 116, ROW F.,
Building Trades Exhibition.

Manufacturers of "RONUK" SANITARY POLISH.

"RONUK" Ltd., Head Office and Factory, PORTSLADE,
near BRIGHTON.

Depôts—LONDON, 16, South Molton Street, W.
MANCHESTER, 285, Deansgate.

NOTHING is more charming than
white woodwork—nothing less so
than ordinary white paint that has turned
yellow. There is one paint that keeps its
whiteness *always*—needs no varnishing
and may be freely washed and polished
—it is

Berger's ENAMELAC

A white Enamel that keeps white

At Olympia Building Exhibition
(Stand 55, Row D), is shown a door
painted in 1904 with Enam-el-ac—
and still white and glossy.

Ask your Decorator to use
Enam-el-ac on your House.

Useful book and all information free from
Lewis Berger & Sons, Ltd.
HOMERTON, LONDON, N.E.

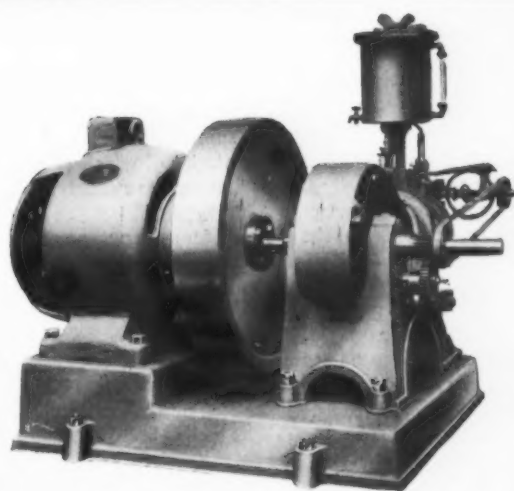


Country House Lighting

It is acknowledged that for Country House Lighting nothing can compare with the Electric Light. Eminently desirable from a hygienic point of view, it also lends itself to artistic arrangement and is by far the safest illuminant in every respect, especially as regards fire risks.

Since the introduction of "OSRAM" Lamps the Electrical energy required for a given candle power has been reduced by 70%, and a material reduction effected in the size of equipment required and space for same, thus making Electricity a practical possibility for every Country House—both large and small.

In addition to lighting, Electricity can also be adapted to supply power for ventilating fans, motor driven pumps, wood saws, etc., etc.



G.E.C. HORIZONTAL PARAFFIN ENGINE DYNAMO SET.



G.E.C. ELECTRIC LIGHT STANDARD (Polished Brass)

Write for Illustrated Descriptive Bulletin (No. 4) containing particulars & prices of
G.E.C. COMPLETE EQUIPMENTS
Post Free on request.

Wholesale only—

THE GENERAL ELECTRIC CO., LTD.,

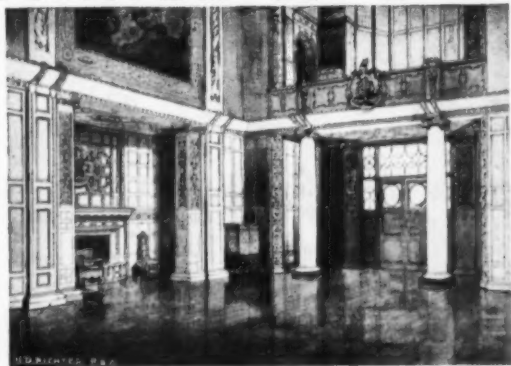
Head Office—67, Queen Victoria Street, London, E.C.

Branches—Manchester, Birmingham, Glasgow, Cardiff, Newcastle-on-Tyne, Dublin, Belfast.

Works—Birmingham, Wulfron, Manchester, London.

WRITE FOR NAME OF NEAREST SUPPLIER.

FURNITURE & PANELLING. THE BATH CABINET MAKER'S COMPANY LTD. BATH.



Exhibiting at the International Building Trades Exhibition, Stand 100, Row E.

TELEPHONE
LONDON 3467 CENTRAL
BATH 167
TELEGRAMS
"ART BATH"

SHOWROOM
18 BERNERS ST.
LONDON W.

THE HOME OF ENGLISH FURNITURE

BAYLISS JONES & BAYLISS, LTD.

CATALOGUE FREE.

IRON FENCING

ORNAMENTAL WROUGHT IRONWORK

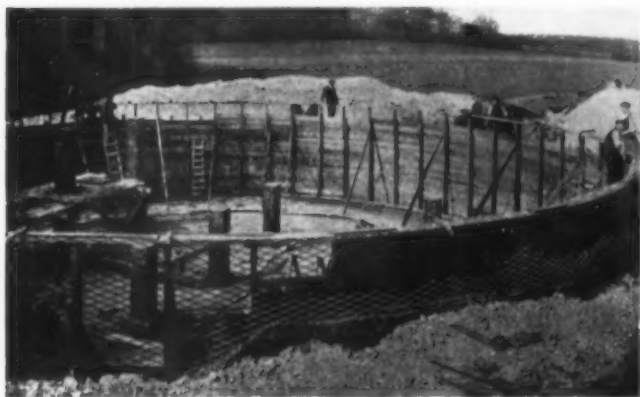
VICTORIA WORKS WOLVERHAMPTON

LONDON OFFICES & SHOWROOMS 139 & 141 CANNON ST.

Please mention "Country Life."

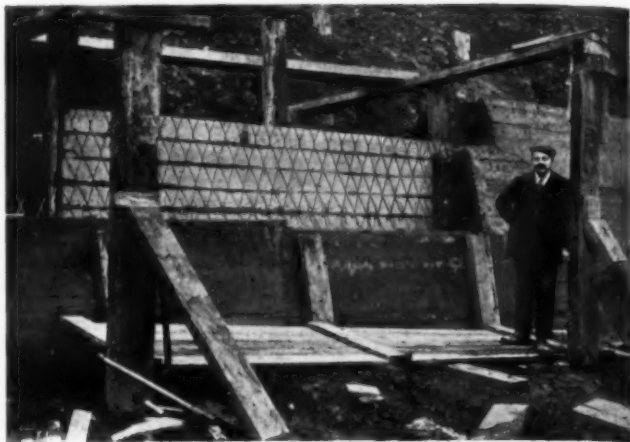
being either sloping, curved or flat. Reinforced concrete is useful for greenhouses. The glass is sustained on sloping beams butting into a ridge piece, all moulded in concrete reinforced with steel. In fruit-houses, in sheds, and often in wine-cellar, shelving may be constructed in reinforced concrete, for it is then impervious to liquids, not subject to decay, is clean and sanitary and fire-resisting. Dairies are required to be cool in summer, warm in winter and scrupulously clean; therefore the material of which they are built should be one that is easily cleansed, otherwise excessive labour will be necessary in their management, or they will become insanitary. Reinforced concrete is just the material for such purposes; the whole of the floors and walls can be of concrete, and the surfaces when finished will be hard and durable. They can be moulded so as to leave no room for the lodgment of dirt, and the interior can be washed out whenever desired. Such appliances as washing-troughs can be built of the same material.

In connection with the garden, one finds concrete used for laying out ponds, waterfalls, steps, etc., and also for the building



RESERVOIR IN COURSE OF CONSTRUCTION.

of rockeries. Safes and strong-rooms are often constructed of reinforced concrete, the reinforcement effectively preventing burglars from getting at the contents, while such a structure is quite fireproof.



RETAINING WALL.

On the farm modern science emphasises the immense importance of studying hygiene. Animals to be kept fit and healthy require as cleanly surroundings as human beings. A few instances will show the value of hygiene on the farm. On an estate in Ireland a dung-pit during the winter months was nothing less than a swamp, in which cattle sank up to the body. The pit was covered over by erecting concrete pillars and a roof, and the floor concreted with a gradual fall to a concrete tank. The liquid that ran into this tank was pumped out and used in the gardens and upon the farm. This reconstruction work cost two hundred and fifty pounds. In summer the shed served as a shelter for the cattle, and in rough weather the men were put in to turn the manure, while the shed was also used for shearing sheep, for lambing ewes, and for young lambs in the early spring. The direct return on the money invested was more than ten per cent. A stone-paved floor in a boiler or mixing house on a farm was always foul owing to fragments of roots, etc., falling between the stones and decaying there. The cattle food left on the floor for even a short time became tainted and imperilled the health of the animals, while it was also difficult to shovel up the food into the feeding baskets and buckets; the cost of repaving with concrete was well repaid. In such floors it is preferable in

The "DUPLUS"

HEATING AND HOT WATER SYSTEM PREVENTS FURRING OF PIPES



HOT BATH ALWAYS READY.

The tiresome waiting inseparable from the usual methods of getting a hot bath is prevented. A plentiful supply of hot clean water is **always** ready to meet every unexpected need.

By opening a single valve

Radiators are Hot whenever wanted

Without the waste or dirt of coal fires, or the unhealthiness of gas. Warmth may be regulated to any degree as required, and rooms warmed without risk of overheating. Both bath and radiators are supplied from

One Boiler only

which requires no attention beyond periodical filling of the fuel supply box, while a **Fuel Economiser**

Prevents Waste by automatically closing or opening the draught door as water is drawn off.

Five years' successful use in large houses has proved this system to be the most satisfactory, as testimonials show. May we send further particulars, cost of upkeep, adaptability to particular requirements, etc.? Write to Inventor,

WILLIAM FREER, Heating Engineer
Wellington Street, Leicester.

"Tis Devon, Glorious Devon"

DEVON FIRE

THE "DEVON" FIRE

Sole Proprietors
Manufacturers
CANDY & CO. LTD.

FIRST IN OFFICIAL TESTS
CARRIED OUT BY
H. M. OFFICE OF WORKS
AND
SMOKE ABATEMENT SOCIETY

London Showroom: 87, NEWMAN ST. W. W. HATHFIELD, DEVON

11 VICTORIA SHOWROOM: Devon House, 11, Whitechapel.
HUDDERSFIELD SHOWROOM: 5, Britannia Chambers, St. George's Square.
MANCHESTER SHOWROOM: Scottish Life Building, 38, Deansgate.

Makers of
BILLIARD TABLES
AND ALL ACCESSORIES



7, Argyll St., Oxford Circus, W.
ESTABLISHED 1860.

J. CHEAL & SONS

LANDSCAPE GARDENERS AND
GARDEN ARCHITECTS

53, VICTORIA STREET, S.W.
and THE NURSERIES, CRAWLEY
Covering 113 acres.

DESCRIPTIVE CATALOGUE FREE.

Advice given and work undertaken in any
part of the country.

New Beautifully Illustrated Booklet on
—“GARDEN MAKING”—
with Testimonials, etc., post free.

THE PETROL AGE



THE uses of petrol are practically unlimited, but it is in COUNTRY HOUSE LIGHTING that it attains its greatest sphere of usefulness.

Spensers' Ideal Lighting

by Petrol Gas is remarkable for its safety and its simplicity. The machine is absolutely automatic, requiring no adjustment, no matter how many lights are in use.

The gas is produced at a steady even pressure, whatever the changes of weather or temperature, and gives a delightfully soft yet brilliant and well diffused light.

Important Points—

Gas never varies in quality—
Ready for use day and night—
No engine to start up.
Requires no adjustment.
Seven years' proved experience.

Installations are rapidly executed by careful and experienced men without injury to decorations or inconvenience to the members of the household. Existing pipes can be utilised if desired.

We will gladly send an Engineer to advise and estimate free of charge and obligation. Write for Booklets.

SPENSERS, LTD.

53c, South Molton Street, London, W. (at Bond St. Station),
and at Edinburgh and Stratford-on-Avon.

Art and Utility A rare combination, especially in greenhouses and similar garden structures! But we have made a speciality of structures which do not sacrifice their useful nature to the artistic, yet which are undoubtedly more artistic than any others.

Let us submit designs
We are at your service



many cases to employ reinforcing rods or meshwork, so as to prevent cracking by reason of expansion and contraction, or local settlement due to a soft point in the foundations. Another instance that shows the value of reinforced concrete was the construction of a dipping-trough and pens with a long, sloping stairway, with concrete grips for the feet of the sheep on their way into the draining-pen. The latter had a concrete floor sloping towards the trough. Thus, as the sheep shook the fluid out of their fleeces, it found its way back into the tank with very little loss.

Reinforced concrete is particularly useful in the construction of stables and mangers. The stable picture shows a range of stalls



REINFORCED CONCRETE CULVERT.

for horses in a large stable block, itself constructed throughout in reinforced concrete. The beams and floor slabs of this material are seen at the top of the view. The divisions of the stalls are of concrete two and a-half inches thick, reinforced with steel rods which run into the cast-iron posts, which in turn are set in bases embedded in the concrete floor. The floor is finished in granite chippings and cement, and grooved to prevent slipping. These stables have been in use for a number of years without damage from kicking horses. This work was designed by Mr. E. P. Wells, C.E.

The range of cattle-mangers and stall-divisions illustrated was constructed in reinforced concrete for Burderop Park, Swindon, from the designs of Mr. W. Hopkins. It is worth noting that the building shown was destroyed by fire in November, 1909, yet the whole of the reinforced concrete work remained in position, and did not need even repair when a new structure was built. In the

reconstructed building concrete was used throughout for the walls, mangers, partitions and water-troughs, both the original mangers and the cattle-shed being reinforced with indented steel bars.

An interesting application of reinforced concrete in estate work is seen in the construction of fences and fence-posts. Wooden fence-posts were almost universal in the past, but they were subject to decay and not able to withstand the effects of water, frost or fire. Iron posts are frequently used for ornamental purposes; but they are subject to corrosion and need painting from time to time, thus entailing a continual expense for upkeep. Reinforced concrete has been found to meet all requirements and to be a very inexpensive substitute. The posts are easily moulded to any form desired, and reinforced to ensure any desired strength.

Another application to estate purposes is the building of retaining walls to hold up earth where excavated, or to retain materials in a bin or some similar position. The old-fashioned way of building such walls in brick or stone was not economical because it required a great bulk. A retaining wall in course of construction is here illustrated. The wall is seen to be reinforced with sheets of expanded steel.

Such retaining walls are often required in sunken tanks, which may at some time be empty, though when full the water counteracts the thrust of the earth. The view of a circular covered reservoir at Horsley Park, constructed in concrete reinforced with sheets of expanded steel, shows an interesting work, for which Messrs. A. M. Mackenzie and Son were the architects.

Somewhat of a similar nature is a wall to hold up water, such as a dam or the sides of a tank raised above the ground. By the adoption of reinforced concrete considerable economy may be effected. On rocky hillsides, too, it would be costly to excavate the ground for a tank, an unnecessary course when one can construct a tank in reinforced concrete quite capable of withstanding the pressure from any head of water.

Storage cisterns and wells may be lined with reinforced concrete, while elevated water-tanks of reinforced concrete have been built to a great height and in all sizes, one of the largest in this country containing three hundred thousand gallons. In connection with rural roads in estate work, reinforced concrete culverts have come into general favour. Bridges for small or large streams are economical and durable in reinforced concrete construction, either of beam or arched form.

Chimney-shafts, shore protection, groynes, conduits, water-

RICHARD CRITTALL

& COMPANY, Ltd.

197 Wardour Street, London, W.

COUNTRY HOUSE, DOMESTIC
ENGINEERING INSTALLATIONS

—A SPECIALITY—

Heating—Hot and Cold Water Supply—Cooking.



Little Court,
Farthingstone.

The Dining Room.
Architect, Walter Cave, Esq., F.R.I.B.A.



Little Court, Farthingstone, Northamptonshire.

Architect, Walter Cave, Esq., F.R.I.B.A.

Some Recent Installations:—

Maytham Hall, Rolvenden, Kent,	} Architects :
Lowesby Hall, Leicestershire,	
Knebworth House, Herts,	
Headington Hill, Oxford,	} Walter Cave, Esq., F.R.I.B.A.
Little Court, Farthingstone, Northants,	
Huntercombe Place, Oxford—Messrs. W.O. & O.P. Milne, FF.R.I.B.A.	} Messrs. Romaine-Walker & Besant.
Sizewell House, Suffolk,	
Galewood Towers, Cambridge,	Wm. Flockart, Esq., F.R.I.B.A.
Denton Manor, Grantham—Arthur Blomfield, Esq., M.A., F.R.I.B.A.	} T. G. Jackson, Esq., R.A.
Rushton Hall, Kettering	

THE PANEL SYSTEM OF HEATING IS INVISIBLE.

SEE OUR EXHIBIT, STAND 37, ROW C.

IN CONFIDENCE

ESSEX
& Co
WALL PAPERS
ARE GOOD



114 & 116 VICTORIA STREET
WESTMINSTER.

LIGHTING FOR COUNTRY
HOUSES, HOTELS, ETC.

ACETYLENE

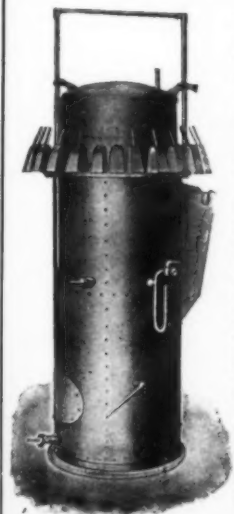


Illustration of GENERATOR,
1-20th full size.

Simplest, Best, Cheapest,
and Safest System
Cheaper than either Oil,
Coal Gas, or Electricity.

THE IMPROVED
"LUBY"
ACETYLENE
GENERATOR

is ONE-TENTH the
price of Electric
Generating Plant.

It ensures a steady light,
softer than electricity,
more powerful than gas,
works automatically,
and can be charged by
an unskilled man or
maid-servant. Write for
Booklet X, giving all
information with regard
to cost, advantages, etc.

We hold a large stock
of BEST CARBIDE.

GEO. ADLAM
& SONS, Ltd.,
Engineers, Bristol.

Estd. 80 years.

LARGE COLLECTION of
OLD ENGLISH
FURNITURE

at Moderate Prices

ANGELL

34, MILSOM ST., BATH

WANTED, Old Tapestry Panels
and Petit Point Needlework

EVERY AMATEUR GARDENER SHOULD READ
Gardening Made Easy

Edited by E. T. COOK.

202 Pages 23 Illustrations
Price 1/- Net. In Cloth, 1/6

Of all Booksellers, or post free 1/3 or 1/6 from GEORGE
NEWNES, LTD., Southampton Street, Strand, W.C.



Attractive Country Homes

These Houses are designed for beauty of elevation
and utility of plan, and have nothing in their
design to jar on the sense of the artistic, but
harmonize immediately with their surroundings.
The above is a typical example of a House,
built with a view to dignified artistic effect,
which has been amply realized.

If you think of building a Week End Cottage, a Bungalow, or a
Country Residence this year, write first for our Illustrated Catalogues.
We build in wood, iron, ferro concrete, or brick as required. Architects'
designs carefully carried out.

Boulton & Paul,
: LTD : NORWICH :

WM. DUNCAN TUCKER & SONS, LTD.



ERECTED AT CROUCH END, N.

WRITE FOR OUR NEW
ILLUSTRATED CATALOGUE.

Kindly mention this paper.

27, CANNON STREET
LONDON, E.C.

WORKS:—TOTTENHAM.



Horticultural Builders
Heating Engineers ::
and Portable Building
:: Manufacturers ::

WINTER GARDENS, CONSERVATORIES, RANGES
VINERIES, STOVES and GLASSHOUSES of
every description.



ERECTED NEAR BIRMINGHAM.

mains and sewer-pipes are carried out in reinforced concrete on an extensive scale. The last illustration shows a reinforced concrete pipe in course of construction. It clearly indicates how the expanded steel sheets are put in position over a timber centre, and how the concrete is applied, the centre being afterwards removed and put in position further along for the next section of the work. Such sewers are very economical. Water mains and culverts for carrying surface water or draining low-lying land are constructed in a similar manner.

CONCERNING KNOCKERS.

THE growing popularity of little reproductions of what are fondly called "sanctuary knockers" deserves a reference.

In the first place these "knockers," with one exception, do not knock, for there is no stud on which the hanging ring can strike. The rings fulfilled the purpose merely of enabling heavy doors to be readily closed. It is commonly believed that when a criminal was flying from justice in the Middle Ages his person was safe from arrest if he could reach a sanctuary and cling to the knocker on its door.

In point of fact, the fugitive was in sanctuary as soon as he reached the churchyard. We are concerned now,



ITALIAN OF THE XVI. CENTURY

however, more with the secular uses of true knockers. The early type, viz., a beast's or demon's head, is of Roman, if not of earlier origin, and was probably employed in England in mediaeval times on secular buildings. Until a few years ago a fine twelfth century example was in use on Brazenhead Farm, near Great Dunmow, Essex. It now reposes in the British Museum. So notable was it that it gave the farm its name, and there is no evidence that it ever had any but a secular use. Brasenose College, Oxford, presumably took its name from the similar knocker which was carried off by students in 1334 to Stamford, and not returned until five centuries later. There are three other "noses" in connection with the college, but all much later in date. The lion mask and ring were common enough throughout Europe during the Middle Ages, and it needed the Renaissance to bring into vogue the splendid compositions, such as the Italian sixteenth century example (from the South Kensington Museum) now figured. It is of bronze, and represents a Triton and Nereid with two sea dragons intertwined and combined with a Satyr mask and a terminal figure.

In England we never reached this brilliant level of achievement; but there is a crude charm about the seventeenth century iron knockers, such as that at Whixley Hall, which is derived from the traditional smith's work of an earlier day, but bears the Renaissance touch. The London knocker of the eighteenth century was often of brass and of a simple type, popular with those wild young gentlemen who, under the name of Mohocks, ill-used wayfarers and wrenched off knockers. Modern brassfounders have taken some pains to fashion knockers and their accompanying letter-plates in infinite variety to suit every kind of entrance door, and as they fill such a prominent place in the eye of the visitor, it is worth while to exercise care in their choice. W.



AT WHIXLEY HALL.



By Appointment.

SHOOLBRED'S

The new Season's designs and colours in

**Casement Fabrics,
Blinds,
Printed Linens,
Old English Chintzes,
Linens and Taffetas**

for Curtains and Loose Covers.

"Inside" and "Outside" Blinds
designed, made, and fitted.

SAMPLES AND ESTIMATES FREE ON APPLICATION.

TOTTENHAM COURT ROAD,
LONDON, W.

Redcliffe Blind Works

Venetian
Door Blind
Holland
Carnaletti
Spanish

W.S. COX.

Manufacturer of
EVERY DESCRIPTION
OF
**WINDOW
BLINDS**

Head Office & Show Rooms
113-114-115 REDCLIFFE ST
BRISTOL, ENGLAND.
Factory: FERRY ST REDCLIFFE.

Branch Business:-
5, HIGH ST STAPLE HILL
GLOS. ENGLAND.

WINDOW POLES OF EVERY DESCRIPTION.

MANUFACTURERS OF
**CLEFT CHESTNUT
PALE FENCING**
HAND & FIELD GATES
and other styles of Fencing

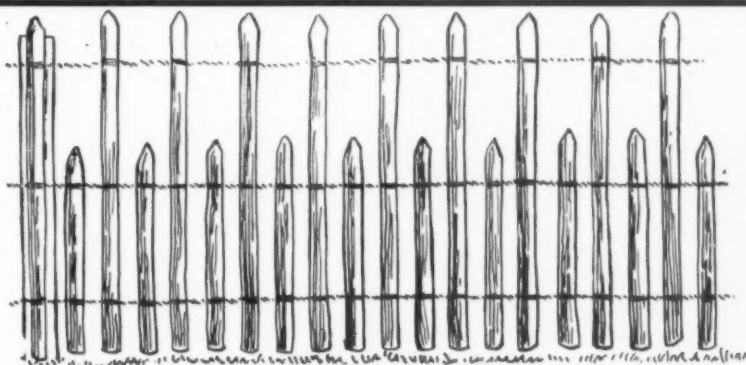
ARCHITECTS' own DESIGNS and
SPECIFICATIONS carefully CARRIED OUT

A COMPLETE CATALOGUE CONTAINING ALL DESIGNS OF FENCING, GATES, Etc., WILL BE SENT ON APPLICATION TO

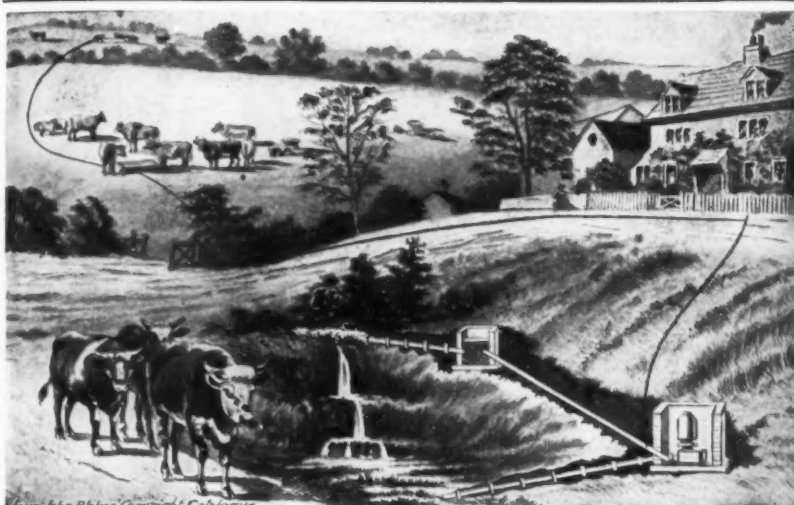
The FERNDEN FENCING Co., Haslemere, SURREY

Olympia, Stand B. Row 3, Municipal Section.

Telephone: 3 KINGSLEY GREEN



Style No. 2—4ft. high pales, 3in. apart. PRICE 1/- PER YARD



**WATER
SUPPLY**

SEND FOR CATALOGUE No. 3 OF

JOHN BLAKE'S
PATENT SELF-ACTING

RAMS & HYDRAMS

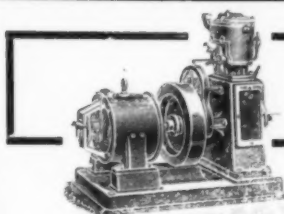
For Raising Water for the Supply of
Towns, Villages, Irrigation, Railway
Stations, Mansions, Fountains, Farms,
etc.

NO COST FOR MOTIVE POWER, WHICH IS
OBTAINED FROM A STREAM
OF WATER PASSING THROUGH THE RAM.

NO MORE HAND PUMPING,
NO COAL, NO OIL, NO STEAM, NO PACKING,
NO LABOUR.

JOHN BLAKE, LD.,

OXFORD STREET WORKS,
ACCRINGTON, LANCASHIRE.



OUR EXPERIENCE

PLEASE
ASK
FOR
LIST
H.L.

on matters relating to the
independent Electric Lighting of Houses, &c., is
at your disposal.

WE ARE MANUFACTURERS

Both Engine and Dynamo are specially designed.
Can we assist you?

THE CRYPTO ELECTRICAL CO.,
Bermondsey Street, London, S.E.
(Eng.)

**WOOD WORK
LASTS TWENTY YEARS**

when treated with

Carbolineum Avenarius (regd.)

WOOD PRESERVATIVE, ANTISEPTIC & DISINFECTANT

The best wood preservative known; cheaper and
more effective than paint.
Gives a nice nut brown colour, and has for the
last 20 years proved an invaluable protection for
Wooden Buildings, Fences, etc., on many of the
largest estates in this country.

C. A. Peters, Limited, Derby

London Office:
116, NEWGATE STREET, E.C.

Liverpool Office:
8, CASTLE STREET ARCADE

Agents for Scotland: THE GLASGOW PATENTS CO. LTD., 120, Great Wellington Street, Glasgow
Agents for Nottinghamshire and Lincolnshire: W. ROBINSON (Nottingham) Ltd., 7 & 8, Victoria Street,
Nottingham

Agents for Leicestershire: W. ROBINSON (Nottingham) Ltd., Churchgate, Leicester

REGISTERED

JAPANOL

TRADE MARK

In Every Colour

For every Climate

JAPANOL ENAMEL

FOR HOUSE DECORATING

(Inside and Outside Use)

Furniture :
Baths : :
Ship Painting
Motor Cars :
Bicycles : :
Golf Balls, Etc.

Please call at our Stall at OLYMPIA April 22nd to May 6th No. 177 Row H

ONE UNIFORM PRICE

FOR ALL COLOURS AND QUALITIES

The
Japanol Enamel Co.
Culford Works, LONDON, N.




TELEGRAMS
CRISPINS, BRISTOL.

NAT. TELEPHONE.
Nº 453.

Greenhouses & Conservatories

HOT WATER HEATING
& DOMESTIC SUPPLY APPARATUS
HYDRANT SERVICE
ERECTED AT THIS RESIDENCE.

Schemes prepared & Estimates submitted for all classes of Apparatus & Horticultural Buildings.



by

JAMES CRISPIN & SONS.

NELSON STREET BRISTOL. CATALOGUE ON APPLICATION.

